JANUARY 1960

Material

Established in 1945 as FLOW Magazine

Handling

ENGINEERING

POWERED INDOOR VEHICLES - IN PLANT CONTAINERS AND RACKS - CONVEYORS - OVERHEAD EQUIPMENT - SHIPPING

TANUAL EQUIPMENT - ELEVATORS AND LIFTS - YARD HANDLING - PLANT EQUIPMENT - SHIPPING CONTAINERS & PACE

SUPPLIES - PACKAGING MACHINERY - SHIPPING AIDS - POWERED INDOOR VEHICLES - IN PLANT CONTAINERS AND F

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HIPPING CONTAINERS & PACKAGING SUPPLIES - PAC

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TEVENS RICE NIVERSITY WICHOFILMS IS NORTH FIRST ST NN ARBOR WICH

RHEAD EQUIRMENT - ROLL BOLL

SEE CONTENTS PAGE 3

PUBLISHED BY THE INDUSTRIAL PUBLISHING CORPORATION

The original publication of the material handling industry, preferred by identified buyers of material handling, packaging and shipping equipment and supplies. NOELTING

ltless L900

MEDIUM

Casters



DESIGN FEATURES

- CORRUGATED TOP PLATE . . . fully hardened to give added strength. Slotted mounting hole spacing permits easy attachment to new equipment. Fits holes drilled from centers of 2%" x 3%" to 3" x 3" when used as replacement casters.
- MAIN LOAD BEARING . . . consists of 21 hardened, polished balls (¾ ′ dia.) rolling in large dia. hardened, lubricated raceway permanently attached to caster horn to assure perfect alignment.
- LOWER THRUST BEARING . . . contains 10 hardened steel balls (%" dia.). Hardened raceway is machined from bar stock. Ball retainer is hardened formed steel.
- EXTRA-LARGE DIAMETER KINGPIN . . . assures bonus strength in this caster, and strong, troublefree construction.
- CLOSE FITTING, FORMED STEEL CUP... protects thrust bearing from dirt, water and other foreign matter. Holds lubricants in bearings, keeps floor
- HEAVY GAUGE, FORMED STEEL HORN... easily absorbs highest rated loads and thrust. Correct offset permits easy swiveling and shimmy-free running.
- FULL SELECTION OF WHEELS . . . for all types of floors and operating conditions. Bolt and nut axles permit quick wheel replacement when needed.

SERIES L9700 RIGID PLATE CASTER

Wheel types and sizes, load capacities and overall heights to match L900 Swivel Plate Caster.

ASK YOUR DISTRIBUTOR!

Your nearby Faultless Industrial Distributor main-

for inearry rautiess industrial distributor maintains a substantial inventory of Faultless Casters for immediate delivery. He and one of the strategically located Faultless Sales Engineers are available to work with you on every handling problem in your plant. Both are listed in phone book Yellow Pages, under "Casters," be-neath the Faultless heading.

FREE! SEND FOR ILLUSTRATED LITERATURE



Faultless Caster Corporation Evansville 7, Indiana

Send me Free L900 Medium Duty Caster information.

City_ State_



Have you ever seen an All-Service "Solid" from this angle before? Chances are, you haven't. But we photographed it this unique way to dramatize some very practical points.

For example, notice the tread design of this Goodyear Industrial Tire. Notice how the lugs are sharply angled for superior traction on ramps or wet, slippery surfaces.

Check the thickness of that tread too. It's extra thick for extra resilience and cushioning. The result: lower floor and truck maintenance costs. Less load damage, too.

Add to all this—tougher compounds for minimum chipping and cutting, lasting adhesion of rubber to base band, plus maximum smoothness and stability.

These advantages can mean only one thing to you: Superior service at lower cost. For all the facts on the All-Service—and the complete line of Goodyear

Solid and Pneumatic Industrial Tires – call in your Goodyear Dealer. Or write: Goodyear, Industrial Tire Sales, Akron 16, Ohio.



INDUSTRIAL TIRES BY

GOODFYEAR

MORE TONS ARE HAULED ON GOODYEAR TRUCK TIRES THAN ON ANY OTHER KIND

All-Service -T. M. The Goodyear Tire & Rubber Company, Akron, Ohlo

Circle 50 on Reader Service Card

USP WENDWAY

CONVEYS ANYTHING

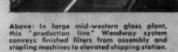
Anywhere.

Wendway offers modern remote-controlled efficiency for conveying practically any light product to any point in your plant. It turns corners, goes up or down, in single or multiple tiers—synchronizes to machine or production line pace. Fits easily into any plant system... can be floor or ceiling mounted to save work space, eliminate handling and equipment. And, Wendway's sturdy, resilient belting is ideal for handling any product or package up to ap-

proximately 20 lbs. per lineal foot.

Wendway is readily available in a variety of standard belt widths (regular or stainless steel) of 6" and 9" in ½" pitch with #9 wire; 12", 15", 18" and 24" in 5%" pitch with #7 wire; 15", 18", 24" and 30" in 3%" pitch with #5 wire. Special widths on request.

Check your plant operation now and see how many places a Wendway system could save your space, handling costs, time and dollars.



Right: Ceiling mounted Wendway saves valuable floor space and proves excellent for cooling or drying operations.



Wendway easily adapts and installs with existing equipment to speed processing and continuous flow of any industrial products eliminates handling, storage and equipment.



"Stub" Wendway, a short, single tier unit conveys packages from bag loader through a series of stapling and sealing operations. "Stub" units may be permanent or portable, caster-mounted to suit the need.



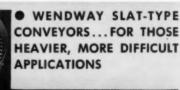
A typical package conveyor installation, this three-tier Wendway system extends the full length of the truck loading dock. System is fed by self-powered "rolloway" switch section (center, left).

Write Joday...
for complete information on USP
Wendway Conveyor Systems.





A highly dependable, extremely versatile, adaptable system with greatly increased carrying capacity (70 lbs. per lineal fact).





Available in 24°, 30° and 36° standard widths in powered curves or straight sections. Larger widths on special order.



UNION STEEL PRODUCTS CO.

Industrial Conveyor Division
ALBION, MICHIGAN

Circle 135 on Reader Service Card

reader's guide to



for January 1960

COVER: New equipment . . . improved equipment . . . redesigned equipment - these are spotlighted in our annual New Products Issue. This year we have added two features that may help you with your material handling planning for 1960. One is a forecast cf what new kinds of equipment will be introduced next year. The other is a summary of manufacturers' predictions as to how much and when their prices will increase in 1960. Each class of equipment is analyzed.

FEATURES.

POWERED INDOOR VEHICLES

Fork lift trucks, industrial tractors, walkies, batteries, chargers, tires.

CONVEYORS AND ACCESSORIES

Conveyors, belting, palletizers, controls, towlines.

MANUAL EQUIPMENT

Hand trucks, platform trucks, portable elevators, casters, wheelbarrows, dollies.

YARD HANDLING EQUIPMENT

Power cranes, front end loaders, tractors, straddle carriers.

IN-PLANT CONTAINERS & RACKS

Racks, bins, boxes, hoppers, pallets, shelving, storage systems.

PLANT ENGINEERING EQUIPMENT

Sweepers, work positioners, doors, work transfer devices, hand pumps.

OVERHEAD EQUIPMENT

Cranes, monorails, slings, hoists, overhead lubricators, grabs.

PACKAGING MACHINERY

Filling, closing, labeling, marking machines.

CONTAINERS & PACKAGING SUPPLIES

Shipping containers, tapes, steel strapping.

SHIPPING AIDS

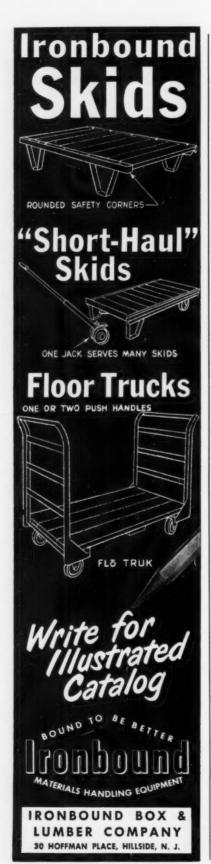
Dock boards, containerization equipment, mobile waste handling equipment.

DEPARTMENTS-





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Material Handling Engineering

volume 15 number 4

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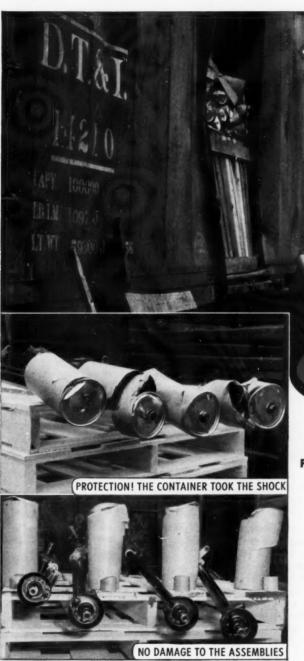
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three-in-one explanation of batteries — how they work, how to select them, and how to maintain them. This article will kick off MHE's brand-new Power Series. We'll also discuss the subjects of powered platform trucks and bulk handling techniques. And we'll bring you more information on conveyor line weighing.



THIS CAR WAS DERAILED AND OVERTURNED PREMIUM PROTECTION COSTS LESS!

For example . . .

Ford Motor Company's steering gear and column assemblies, protected by Cleveland Container metalend sleeves and spacer tubes, survive the overturn of a railroad car with no damage to the assemblies.

PICTURES TELL THE STORY!

A bag type of covering, formerly used, gave protection from dirt and dust but NO protection against blows or jars . . . and COST MORE than the Cleveland Container sleeves.

Our experience, plus sound design engineering, can provide your products with similar PREMIUM PROTECTION . . . usually at lower costs.

Why pay more? For quality products . . . call CLEVELAND!



Write for our latest brochure on packaging.

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Plants and Sales Offices: Cleveland Detroit Chicago Memphis

Los Angeles Plymouth, Wis. Jamesburg, N. J. Fair Lawn, N. J. COMPANY

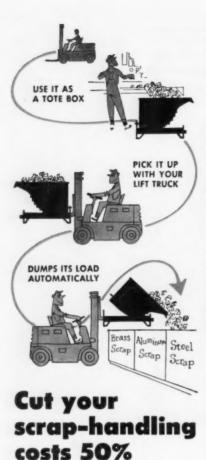
6201 BARBERTON AVE. . CLEVELAND 2. OHIO

ALL-FIBRE CANS - COMBINATION METAL AND PAPER CANS SPIRALLY WOUND TUBES AND CORES FOR ALL PURPOSES

CLEVELAND CONTAINER CANADA, LIMITED Plants & Sales Offices: Toronto & Prescott, Ont. - Sales Office: Montreal

Sales Offices: New York City Washington, D.C. Rochester, N. Y. West Hartford, Conn.

> Abrasive Division at Cleveland



Handling scrap metal is a simple, one-man operation when you use Roura Self-Dumping Hoppers. Place them in strategic spots for scrap collection. One man with a lift truck carries them to scrap bins or freight car... flips the latch and the hopper automatically dumps its load, rights itself, locks itself, and it is ready for another load. Hoppers may be labelled for different kinds of scrap for easy, profitable scrap segregation. No wonder they're cutting costs in hundreds of plants.

Forks or platform of any standard lift truck slip easily into under-frame of a Roura Hopper. Pick-up is swift and simple. Hoppers are made in five sizes, ½ to 2 yard capacity, and mounted on live or semi-live skids with choice of wheels.

They're made of ¾" steel plate with continuous arc-welded seams. Good for years of toughest service. Standard models shipped from stock immediately. Also available in stainless steel and galvanized. Start now cutting costs with Roura.

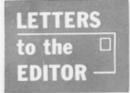


WANT DETAILS?

Clip this coupon . . . attach it to your letterhead . . . sign your name . . . and mail to . . .

ROURA IRON WORKS, INC.

1411 Woodland Ave., Detroit 11, Mich. Circle 90 on Reader Service Card



Everything's Fine, BUT -

SIR:

Your usually excellent publication included a fine article illustrating good use of a hydraulic crane in the November issue. It was the feature, "Easy Handling in the Storage Yard," on

page 65.

There was, however, a point or two of ambiguity that sharp material handling engineers might have noticed. The crane in the big illustration is manufactured by our company. I would like to point out that all Austin-Western cranes provide a full 360 degree boom rotation, regardless of whether or not the vehicle is equipped with a cab. In this particular case, the equipment was of somewhat special design, used by this company without a cab. Also, it is not usually necessary for a crane of this type to be counter-weighted. Actually, these counterweights were added by the user for their particular purposes. Outriggers may not have been required for their operations, but we do provide them as standard equipment for normal usage where they may be necessary. Of course, our outriggers are integrally designed with this equipment to facilitate their application with practically no effort and to provide maximum, safe and efficient operations at all times.

> Robert Diller Austin-Western Co. Aurora, Ill.

We stand corrected.

Orchids from AF Brass

SIR:

I have just read the December issue of MATERIAL HANDLING ENGINEERING in which you do great justice to the Air Force Packaging mission.

You are to be congratulated.

I only hope your readers and advertisers can appreciate the magnitude of our problems and take the "beam of light" your December issue has shined and face it in the direction in which they seek more knowledge about our objectives, approach and capabilities.

May I be humble at this time and express my gratitude to your most capable staff for an effort I consider to be outstanding.

George A. Davies
Lt. Colonel, USAF
Chief, Packaging Branch
Equipment & Facilities Division
Directorate of Transportation,
DCS/M

Our cup runneth over.

Wants Strapping Reprints

SIR

Would you please supply this firm with two (2) copies of the article, "Facts About Steel Strapping," by Albert M. Joseph, Associate Editor. (MHE, Sept. '59, p. 84.)

M. Archambault Canadian Arsenals Ltd. Montreal, P.O.

Gladly.

Praise From an Author

SIR

As a result of the fine job you did with my article ("Mechanize Small Lot Order Picking," MHE, Nov. '59, p. 68), I have had many favorable comments on our bin mechanization at Belle Mead.

Several agencies have requested further information concerning this installation.

Your publication is doing a very effective job of keeping our industrial engineers informed of the latest technological improvements, and is referred to constantly in the course of the work in our department.

Theodore H. Allegri Federal Supply Service General Services Administration

Not without the help of such fine contributors.



January 25-28
Plant Maintenance & Engineering
Show
Convention Hall
Philadelphia

February 4-6
Eighth Annual Material Handling
Short Course
Georgia Institute of Technology
Atlanta

February 22-26
Annual Midwest Work Course on
Material Handling Analysis
University of Kansas
Kansas City, Kansas

March 18-19
Refrigeration Research Foundation
Symposium
LaSalle Hotel
Chicago

April 4-7
29th National Packaging Exposition
Sponsored by American
Management Assoc.
Convention Hall
Atlantic City

April 12
5th Annual Industrial Material
Handling and Packaging
Conference
University of California
Berkeley

April 18-19
Third Annual Conference on
Automatic Techniques
Cleveland-Sheraton Hotel
Cleveland

May 3-13 1960 Mechanical Handling Exhibition Earl's Court London, England

May 11-13
3rd Western Regional Material
Handling Show and Packaging
Cavalcade
Great Western Exhibit Center
Los Angeles

May 26-28 1960 MHEDA National Convention Congress Hotel Chicago

June 6-8 Material Handling Institute's New England Show Commonwealth Armory Boston

July 19-21 1960 Western Packaging & Material Handling Exposition Pan Pacific Auditorium Los Angeles

Most widely-used hand pallet truck in America



Hydraulic PALLET TRUCK

BIG CLAIM for a little truck . . . but it's absolutely true! More RAYMOND Lightweight Hydraulic Pallet Trucks are purchased today than any other hand pallet truck.

WHY? Because this RAYMOND Truck does so many jobs so well ... is superbly built to withstand years of use and abuse. Lightweight to lessen operator fatigue, easy to maneuver and pull. Patented booster roll provides effortless pallet entry. Convenient foot pedals lift and lower your load. Completely precision hydraulic for dependable operation. Includes aluminum alloy construction, husky one-piece welded steel frame, safe dual-purpose brake, 270° turning radius.

MAIL COUPON for full details!

The RAYMOND CORPORATION

3310 Madison St., Greene, N.Y.

TITLE
STATE

HANDLING ROUND THE COUNTRY

STANDARD SUGGESTED FOR VAN CONTAINERS

The MH5 Committee recommends a standard for van freight containers: 8 ft wide, 8 ft high, and lengths in 10-ft modules, 10, 20, 30, and 40.

The MH5 project, sponsored by the American Society of Mechanical Engineers and the American Material Handling Society, must obtain national acceptance before the American Standards Association (ASA) will approve. Trade associations, technical societies, and government agencies will vote by letter.

Purpose is to standardize containerization for interchangeability among carriers. MH5 also is working on standards for pallet and cargo containers, plans to petition ASA to start an international program.



SHIPMENT of four huge ram trucks indicates renewed activity in the nation's steel mills. Elwell-Parker says this is Cleveland's largest single shipment of this type of truck. Weighing more than 163,000 lb total, they needed two flatcars for the trip to Inland Steel's East Chicago, Ind., mill. These battery-powered trucks can lift several tons of coiled steel.

TWO SHOWS REPORT INCREASING INTEREST

The Material Handling Institute's New England Show already has two-thirds of its floor space reserved. It will be held June 6 through 8 in Boston's Commonwealth Armory. The response, says MHI Managing Director L. West Shea, is a positive indication of industrial marketing interest in New England.

The Third Western Regional Material Handling Show—Packaging and Shipping Cavalcade reports applications and inquiries on exhibit space far eclipsing the two preceding shows. It will be held May 11 through 13 in Los Angeles' Great Western Exhibit Center.

IN THE NEWS . . .

Live demonstrations on closed circuit TV will be featured at the Fifth Joint Military-Industry Symposium to be held Feb. 8 through 10 in the Sheraton Park Hotel, Washington, D. C. Packaging and handling operations will be shown. The Air Force sponsors this meeting of government and industrial personnel. Further information is available from Lt. Col. George A. Davies, chief, Packaging Branch, Headquarters USAF, Room 4312, Munitions bldg., Washington 25, D. C.

FIRM NAME CHANGED

Top Line Equipment Co. is the new name of the Robert Dodd Co., Portland, Ore., and Medford distributor. Purpose of the change is to identify more closely with the type of business and expanded line of products.

The firm represents Industrial Truck Division of Clark Equipment Co., Monarch and Notat Industrial Tires, Prime Mover platform trucks, Hughes Kennan Roustabout Cranes, Fococranes, Rack Hydraulic pallet trucks, and a complete line of dockboards.

TO START YOUR DIESEL

Here are some things you should know about starting a diesel engine in cold weather, according to Development Engineer Herb Orwig of Trojan Division, The Yale & Towne Manufacturing Co.

Starting. You can heat air for the cylinders with glow plugs. Let the plug heat fully before cranking. Or, you can use either in capsules or cans. This easystarting fuel gives immediate results. Caution: never combine these two methods.

Crankcase oil. Multiple viscosity oils can be used. Or, drain the oil each night, keep it warm, and add it the next day.

Cranking motor. Be sure your battery is large enough.

Water jacket coolant. Some engines will take special bolts with built-in heating units.

Caution: once the diesel starts, let it warm up before turning on full engine power.



name the materials handling job BARRETT HAS THE EQUIPMENT

ENGINEERED TO YOUR JOB FOR MAXIMUM SAVINGS

For greatest efficiency and lowest cost, your materials handling equipment needs to meet exact job requirements. That's Barrett's specialty. The complete Barrett line goes from hand to electronically operated tractors and trucks. Barrett's know-how and service help you engineer this specialized equipment to your specialized needs. Behind Barrett products and know-how is a half-century of experience... ahead is the most progressive product development program in the industry.

So, for best results, buy Barrett.



Lift-truck with power up and power down. Full clearance into and out of pallets. Handles empties as easily as full. Easy-entering "Flying Saucer" pallet wheels. Capacities to 6000 lb.



STAND-UP RIDER TRACTOR

Model SG with first-of-its-kind features. Gear drive and adjustable time-delay mechanism for smoother power; easy maintenance. Ultimate drawbar pull, 550 lb. Rolling capacity, 20,000 lb.



A fast, highly maneuverable straddle fork truck for use in narrow aisles. Stand-up rider-type with 24-volt operation. 1000-to 4000-lb, Cap.





AUTOMATED EQUIPMENT

Barrett offers time- and money-saving Guide-O-Matic® tractors and remote-controlled Radox® models for automated materials handling.

SIT-DOWN RIDER HI-LIFT

An economical fork truck for all types of industrial use. Short turning radius, easy operation. 1000-, 1500-, 2000-lb. Cap.





HI-LIFT OX (FORK TYPE)

Model TTG walkie-type electric tilting fork truck. Ideal for storing and moving pallot loads in congested areas. Cap., 2000 to 3000 lb.

PORTABLE ELEVATORS

Hand and electric. Pile "ceiling high" to conserve floor space. Cap., 500 to 2000 lb. Custom-built to any cap.





HAND PALLET TRUCK

Model HX. Lightweight, rugged construction; 4½" lift. Hydraulic packaged unit with overload valve; adjustable lowering control. "Flying Saucer" pallet entry rollers. 2000, 2500 and 3000-lb. cap. Other models in 4000 and 6000-lb. cap.

STORAGE RACKS

it to Barrett-Cravens.

Sectional welded steel space-saving Barrett racks for storage of barrels, kegs, skids, pallets, dies, etc.

For additional information on the above equipment, simply check those of interest.

Then tear out this advertisement and send





BARRETT-CRAVENS COMPANY

614 Dundee Road, Northbrook, Illinois
Representatives in All Principal Cities
Canadian Licensee:
S.A. Armstrong, Ltd., Toronto, Canada

EVERY PLANT MANAGER SHOULD HAVE THIS BOOKLET

"Methods and Ideas" gives you 49 case studies of standard and out-of-the-ordinary material handling experiences. Write for it today.



ARRETT
MATERIALS HANDLING ENGINEERS FOR HALF A CENTU

Circle 17 on Reader Service Card



FOR lower production costs ... stronger, neater closures ... ability to get out rush orders in a hurry, you can't beat Union Special Bag Closing Machines! Specially built to stand up under heavy production schedules, these machines provide the high output rates needed to meet modern competitive conditions.

In the Union Special line, it's easy to find the right unit to meet your requirements. ASK FOR RECOMMENDATIONS.

SEND FOR THIS BULLETIN!

It's easy to find just the right unit to meet your individual needs in Union Special's big line of bag closing machines. Ask for a copy of Bulletin No. 200, "UNION SPECIAL FILLED BAG CLOSING MACHINES."





415 N. Franklin St., Chicago 10, III. Circle 104 on Reader Service Card

COST CUTTING IDEAS

Speeds Repairs

Chemically cold self-vulcanizing repair material called Pang helps solve many of the problems involved in the mainte-



Circle 326 on Reader Service Card nance and repair of conveyor belts. Made by Automatic Vulcanizers Corp. the material is effective with rubber, leather, steel, wood, and textiles. No metal plates or rivets are needed. Aside from belt-splicing operations, Pang patching jobs can be done by one man. The material cures without heat and no special tools are required. Different belt sections can be repaired at the same time. Equipment does not have to be dismantled to make repairs. Various size patches are suitable for repairs of holes from pebble size to large impact breaks and holes. The patching material comes in sheet form, and various sizes and shapes can be cut from the sheet.

\$ Jet Cleaner Halves Cleaning Time

Adoption of a hydraulic jet cleaner in the rendering plant of Chicago Refining Corp. has



Circle 327 on Reader Service Card

eliminated rejects due to improper cleaning, and actual cleaning time has been cut in half. Large meat buggies and smaller slack barrels require thorough cleaning after each use. A Sellers Injector Corp. Booster Jet cleaner cleans 60 buggies and some 130 barrels daily. Formerly, this job required 2 men using scrub brushes. Now one man does the job thoroughly. The high velocity stream produces a powerful jet of hot water even at distances of 30 feet from the nozzle, washing away any adhered fat or grease, even in hard-to-reach corners of the buggies and barrels.

System Saves Storage Space And Handling

Twelve separate systems for chemical processing converge at an automatic weighing station at the Udvlite Research Corp. in



Circle 328 on Reader Service Card

Detroit. They save storage space and handling operations. Because of the necessity for purity in individual chemical products, separate processing lines are set up for the products that are used in electroplating formulations. Separate reactors, filters, storage tanks, pipe lines, and pumps now handle each product without contamination from others. All process lines converge in the packaging area where a 10,000 lb Howe truck scale is installed. Shipments of chemicals are weighed out accurately in their shipping containers. Then they're lifted by fork trucks to shipping areas.

TOWMOTOR TRUCK Stacks either side in 6-foot aisles...

Increases storage capacity up to 35% . . . gives you an "extra warehouse" free

Newest idea in fork lift trucks!



... also performs like standard lift trucks

The "Naro-Aisle-Stack" series is a Towmotor "first" that offers an entirely new mass handling technique in fork lift truck operation.

Equipped with hydraulically operated outriggers, Towmotor "Naro-Aisle-Stack" trucks perform right and left angle stacking in aisles 6 feet wide, or from four to six feet narrower than lift trucks usually require.

In addition, they also perform all of the functions of a regular fork lift truck. They pick up and lift heavy loads at speeds of 70 feet per minute. Their built-in maneuverability and pivot-action make it possible to operate in congested storage areas and turn sharp corners with the agility, safety and comfort only a sitdown type truck offers.

The new Towmotor "Naro-Aisle-Stack" truck is made possible only by the use of the exclusive Towmotor Towmostatic Drive - the drive that eliminates the clutch, the transmission, the drive line, the differential and all shifting mechanism. It's a brand new idea in fast, efficient materials handling.

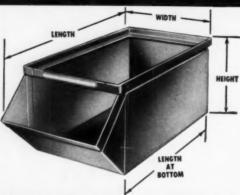
For complete information, write Towmotor Corporation, Cleveland 10, Ohio, and ask for folder No. F-37.

TOWMOTOR - GERINGER LEADERS FOR 40 YEARS IN BUILDING FORK LIFT TRUCKS, CARRIERS AND TRACTORS

Gerlinger Carrier Co. is a subsidiary of Towmotor Corporation

Circle 115 on Reader Service Card

REDUCE HANDLING COSTS! INCREASE STORAGE CAPACITY! SIMPLIFY PARTS CONTROL!



"CUSTOM BUILD" TO SUIT YOUR NEEDS WITH MULTI-PURPOSE STACKBINS



In processing ...

portable Stackbins carry common parts and supplies to points of usage without time-wasting transferal to other containers.



In storage ...

Stackbins stack securely to any desired height, with or without Stackracks. Floor space requirements reduced – stock capacity increased.



In assembly ...

Stackbin flexibility permits adapting assembly station to production requirements.

Available in sizes to suit your requirements

Bin No.	Width	Length	Bottom Length	Height	Weight (lbs.)
00	31/2"	6"	4"	3¾"	11/4
0	41/2"	8"	6"	41/2"	134
1	51/2"	12"	10"	41/2"	3
2	71/2"	151/2"	121/4"	6"	51/2
3	9"	18%"	14%"	71/2"	9
4	12"	201/2"	15%"	91/2"	14
5	15"	24"	18¼"	11"	201/2
6	18"	30"	24"	12"	29

STACKBINS ARE MADE of heavy gauge steel, all-welded construction with positive stacking rim. Full flow hopper front and smooth interior make contents always visible – always accessible.

All Stackbin products are sold direct. Write for more information today!

Stackbin Corporation, 1359 Main St., Pawtucket, R. I.

Mfd. & sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa



Circle 95 on Reader Service Card

MHEDA Debentures

The board of management of the MHEDA National Training Center announces the availability of a limited supply of \$500 debentures, offered to users, manufacturers, and distributors of material handling equipment. They are not to exceed \$100,000 and bear 6% interest annually.

Purchasers of the original Series "A" debentures will have their names displayed on a bronze plaque at the Newport, R.I. Training Center under the heading "Founding Shareholders."

Cliff Haddrell, chairman, of the board of management, explains that the debentures are an investment in the future of the material handling industry. Assisting Haddrell with administration, over-all operation, and financing of the Center are Don Bowman and Ed Wallace.

Information on purchase of the debentures may be obtained from William R. Noble, Secretary, MHEDA Headquarters, 1028 Connecticut Ave., N.W., Washington 6, D.C.

1-Week Course Schedule

The opening 1-week course will be given the week of March 14, 1960: Industrial Trucks — Basic Sales Course.

Other following 1-week courses are scheduled to start as follows: #2 March 28, 1960: Industrial Trucks — Advanced Sales Course; #3 April 11, 1960: Engineered Equipment Sales;

#4 April 25, 1960: Foundry Material Handling; #5 May 9, 1960: Metal Formings And Stampings; #6 May 23, 1960: Chain Store Grocery Warehousing; #7 June 13, 1960: Painting, Lacquering, and Finishing Metals.

For information on enrollment, tuition, and accommodations, write to: Director Harry Freeman, MHEDA National Training Center, Box 537, Newport, R.I.

M H E D A

NATIONAL TRAINING CENTER

One Hundred Thousand dollars in Series "A" debentures at \$500 each are being offered by MHEDA National Training Center bearing 6% interest annually, redeemable by 1965.

This offer is limited to individuals and groups interested in the advancement of the material handling industry—manufacturers, distributors, and users of material handling equipment; publishers, educators, and supporters of the material handling science.

Funds raised by the sale of these debentures may be used only for the advancement of industry education in support of the MHEDA National Training Center programs.

Individuals and groups within the material handling industry are urged to support the objectives of the MHEDA National Training Center by purchase of these debentures.

Address requests for debentures to: Secretary, MHEDA National Training Center, 1028 Connecticut Avenue, N. W., Washington 6, D. C.



MHEDA NATIONAL TRAINING CENTER
P. O. Box 537 • Newport, Rhode Island

METAL LUMBER

... Faster, Stronger, Safer Framing

Republic METAL LUMBER® solves framing problems fast. Simply measure, cut, assemble with ordinary bolt and nut fasteners.

Bolting pattern is a symmetrical series of transverse and longitudinal slots, punched on ¾" centers. This pattern provides bearing capacity in joints equal to or greater than that of the angles in the beam section.

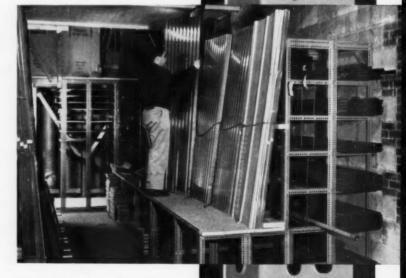
METAL LUMBER is fabricated from cold rolled steel to assure uniform physical properties, and high strength-to-gage ratio.

And Bonderized after fabrication for complete protection to all exposed surfaces.

Available in two gages, two widths, in standard bundles of either 10- or 12-foot lengths. Order from your Republic-Berger warehouse. Send coupon for more information.



Build any framing structure faster and easier. No skilled labor required. METAL LUMBER won't warp, can't crack, splinter, or rot; is reusable. Mezzanine structure permits maximum storage at Millhurst Mills, Freehold, New Jersey.



METAL LUMBER solves many warehouse storage problems. Here, split-level storage has METAL LUMBER bins engineered for every type of building product. Flooring is laid on top of metal framing on lower level. METAL LUMBER is used throughout the Millhurst Mills Warehouse.



STANDARD REPUBLIC MATERIALS HANDLING UNITS SIMPLIFY CON-TAINERIZATION. Save time in stack, store, ship operations, and reduce storage space requirements. Standard Republic Boxes feature heavy-duty stacking brackets and corrugated construction that combine to deliver long, efficient service at low per-year cost. Four-way fork channels simplify handling in restricted space. Republic-Berger materials handling specialists will work with you in solving your problems. Write today.

REPUBLIC WEDGE-LOCK® PARTS STORAGE UNITS are easy to load and unload from either side. A rigid, strong long-parts storage unit, because, the heavier the load, the tighter the grip. Wedge-Lock construction features a post that will not bend, a reinforced shelf that does not sag, and a concealed sway-proof joint. Unlimited shelf arrangements. Send coupon for complete details.





REPUBLIC STEEL PALLET RACKS, another Republic standard materials handling unit, save space and simplify palletizing and stacking of bulky, uneven, odd-lot, and fragile materials. Tubular steel supports adjust every six inches to handle palletized material of any height. Two-way entry permits loading and unloading from either side. Select single pallets from any level without restacking. Write for specifications and data.



REPUBLIC STEEL

Worlds' Widest, Range of Standard, Steels and Steel Products

REPU	IBLIC STE	EL CORP	O	RATION		
DEPT.	MH-8634					
1441	REPUBLIC	BUILDING		CLEVELAND	1,	OHIO

Please send additional information on the following:

- Republic METAL LUMBER
- Materials Handling Equipment
- Republic Wedge-Lock Shelving
- Republic Pallet Racks

Name_____Title____

Firm____

Address______Zone__State____

Circle 120 on Reader Service Card



The Year Ahead

by Charles L. Lippman, president, SPHE



A S NEW PRESI-DENT of our Society, I want to take this opportunity to wish each of you well in the com-

ing year and to tell how much I appreciate the honor of this position. I know that all of you want to join me in expressing our thanks to John Mount for his fine leadership during the past two years.

With the start of a new year it's customary for each of us to take an inventory and set up for ourselves new resolutions, new goals, new objectives. I have been thinking about doing something like this for SPHE.

After a lull in membership growth, our Society has started again to expand in numbers. Good programs are going in almost all chapters. The National organization has set its books in order and laid plans for a continually expanding service to local chapters. Our programs with several universities are achieving greater standards than ever before. Organization in separate chapters, as far as we can tell, is in good shape. This is a good inventory.

To make things even better, the field of packaging and handling is taking on new importance with the growth of automation and new methods. The field is moving so rapidly that it takes a good man to keep up with the latest developments.

Our Society is, and should be, the greatest single help to each of us in keeping ourselves current on progress in our field. As you know, SPHE is the leading group of its kind in our field. This we may be proud of.

Your National officers will strive during the coming year to help the local chapters provide you with programs that keep you up to date on packaging and handling developments in the U. S. and abroad. And we hope SPHE will be of even greater value to you in the future than it has been in the past.

We urge you to support your local chapters. That will do more than anything else to further our ability to help you. Good attendance, well organized committees, new agressive membership — these will make it easier for your chapters to plan the kind of programs that will please each of you the most good.

We look forward to a year of growth, a year of service, a year of progress. We hope each of you will share it with us.

New National Officers Take Over

Charles L. Lippman became SPHE's new national president January 1st. Lippman is with Columbia-Geneva Divison, U.S. Steel Corp., San Francisco, Calif. He was formerly executive vice president of the society. He succeeds John Mount, Insurance Co. of North America, Philadelphia, who becomes chairman of the board. Other officers are:

Executive vice president: A. M. Lownsbury, Edgar's Warehouse, Inc., Detroit, Mich.

Vice presidents: J. D. Farrington, Jr., Jiffy Mfg. Co., Hillside, N. J.; H. A. Kilmer, North Ameri-

can Aviation Corp., Downey, Calif.; and K. V. Moulton, General Electric Co., Zanesville, Ohio.

Secretary: Mrs. Elaine R. Pitts, Sperry & Hutchinson Co., Chicago, Ill. (repeating).

Treasurer: L. S. Beale, Wirebound Box Manufacturers Assn., Chicago, Ill. (repeating).

All will serve two-year terms. Miss Kay Crowley remains as administrative secretary.

LA Names Technical Paper Contest Winners

First prize of \$100 in the Southern California Chapter's annual technical paper contest went this year to M. J. Peterman and R. S. Nelson, Rocketdyne Division of North American Aviation, Inc. Their paper was on "System for Standardizing Containers by Use of Modular Panels." W. G. Lawrence, Boeing Airplane Co., won second prize with the paper, "The Reusable Container as an Integrated Material Handling Device." J. L. Krager, Jr., Radio Corporation of America, was third on "Package Design - Basic Principles."

Chicago to Hold College Course in Packaging

The Chicago Chapter will hold its 12th evening class in Packaging Materials and Methods this spring at Illinois Institute of Technology. Title: I. E. 326 "Packaging Materials and Methods." Registration dates: February 8 and 9 from 6 to 8 PM at 3300 So. Federal St., Chicago. Credit hours: 3. Tuition: \$64.00. Instructor: J. F. Carrington, Supervisor of Packaging Engineering, Spiegel, Inc. Class meets: Starting February 15, each Wednesday evening from 6:20 to 9 PM for 17 weeks.

NEW ELPAR ACRO-SMOOTH

with these most wanted features...

- Smooth stepless speed control
- Easy, low cost maintenance
- Increased work output

Cut your maintenance headaches in half with this new line of ELPAR electrics. They represent a new concept in fork truck design with . . . a new step-less speed control that's simple to maintain; demountable electrical control panel and hydraulic valve assembly for fast bench repairs; center-sill frame construction that guarantees easy service accessability; caster steering axle that eliminates steering knuckles and provides shorter turning radius. Plus these features: low pressure hydraulic system, low stress differential, completely housed drive gearing, rigid dual tilt mountings, hydraulic wheel brakes and many more cost cutting advantages.

Don't miss this opportunity to slash your maintenance costs and increase productivity. Get the facts on ELPAR's new "Acro Smooth" line today!



Send for This New Folder-get complete details on this new line of ELPAR electric fork trucks.

THE ELWELL-PARKER ELECTRIC COMPANY 4231 ST. CLAIR AVE. . CLEVELAND 3, OHIO

Capacities Individual models for 4,000, 5,000, 6,000 and 7,000 lbs. ELPAR ELECTRIC TRUCKS

Slash Truck

Maintenance

"KEE KLAMP"

...and ordinary
pipe will build a
thousand and one
pipe structures
quicker and
at lower cost





This "KEE KLAMP" rock increased storage capacity of stockroom by more than 30%

- Shelving
- Pallet racks
- Worktable frames
- · Pipe and bar racks
- Display and sign
- frames
- Grandstands
 Boat docks
- Fencing
- Railings

IT'S ONE,
TWO, THREE WITH
"KEE KLAMP"
SLIP-ON FITTINGS

Pipe does not require threading, it slips into "KEE KLAMP" fittings. Set screws, each having a 4000 lb. direct load capacity, lock pipe rigidly in place.



With "KEE KLAMP" Slip-on Fittings and ordinary pipe, you can build strong, temporary or permanent racks, shelving, frames, railings or any pipe structure for exact space condition and for any load requirement.

"KEE KLAMP" Slip-on Fittings are strong, malleable iron, galvanized, for indoor and outdoor use. Made in 58 varieties for pipe sizes 3/6" to 2".

"KEE KLAMP" structures are easily dismantled for moving or modification. "KEE KLAMP" fittings can be used over and over.

WRITE FOR CATALOG K25

Several choice areas open to Representatives with stocking facilities—Write for information.

KEE KLAMPS NORTH AMERICA LIMITED

1079 William St., Buffalo 6, N. Y.

CANADIAN ADDRESS:
P. O. Bex 370, Station 19
Toronto, Ontario

At Cascade Manufacturing Co. . . . E. L. "Al" Young is new regional representative for the



north central territory. This covers Ohio, Indiana, Michigan, Kentucky, North Carolina, West Virginia, and Tennessee. Young is a for-

mer employe of Allis-Chalmers and Clark Equipment Co.

At American Sisalkraft Corp. . . . Richard C. Robinson has been transferred to the Tape sales division in Attleboro, Mass. He will help service customers in the gummed paper industry. Robinson was sales representative in Washington and northern Idaho.

At J. I. Case Co. . . . Dr. I. Richard Gregor has been appointed director of manufactur-



ing for foreign operations. He is a former employe of the Kearney and Trecker Manufacturing Corp. In Czechoslovakia, Dr. Greg-

or was manufacturing manager of five plants employing 18,000. He has an MA from Pennsylvania State University and a doctorate in law from Charles University in Prague.

At Aurora Pump Division, The New York Air Brake Co. Raoul D. Elder has been named sales manager. He was former export sales manager and district sales manager.

At Hinde & Dauch Division of West Virginia Pulp and Paper Co. . . . Louis Dela Grange has been appointed regional engineer. He will supervise engineering projects for equipment and buildings at the Cleveland,

Detroit, Eaton, O., and Sandusky plants. Dela Grange was a former field engineer with West Virginia's central engineering department.

At Vickers Inc., Division of Sperry Rand Corp. . . . LeGrand "Lee" Terry is new eastern re-



gional sales manager, Mobile Hydraulics Division. He supervises mobile sales in a 24state area. Terry had been district manager of

the Mobile Hydraulics Division's Detroit office. He is a member of the Society of Automotive Engineers and the American Society of Agricultural Engineers.

At Dow Corning Corp. . . . William H. Ragborg was named manager of a new technical service and development laboratory to be built in Greensboro, N. C. Ragborg has been assistant manager of the Fluids Section of the Product Engineering Laboratories.

At Derby Sealers Inc. . . . Bruce Holman has been named West Coast representative. He



formerly represented the company in New Jersey and Albany, N. Y. Holman's headquarters will be in the Los Angeles area. A veteran

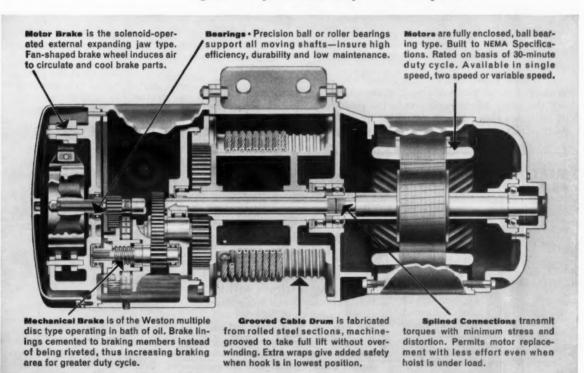
of three years in Army, he attended Bucknell University and Springfield College.

At Link-Belt Co. . . . Charles J. Naulty was appointed sales manager for the Pacific Southern Division. His territory includes Los Angeles, southern California, southern Nevada, and three states of northern Mexico.



Feature for feature, you are years ahead with a WRIGHT Speedway Electric Hoist. Designed and manufactured to meet the varied demands of modern high speed production, Speedway Hoists give you the safety, adaptability, ruggedness and efficiency which you can't get in a low-priced hoist. Many of

these performance and maintenance features are exclusive with WRIGHT. So if you are considering the purchase of an electric hoist, it will pay you to investigate the advantages of WRIGHT Speedway Hoists. For complete information, write our York, Pa., headquarters for Catalog E-58.



WRIGHT HOISTS

Wright Hoist Division · American Chain & Cable Company, Inc.

York, Pa., Atlanta, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

Circle 3 on Reader Service Card







CHICAGO CHAPTER members visit Clark Equipment Company's Central Parts Division warehouse. In photo, they observe small parts stocking.

CHICAGOANS SEE HOW CLARK STORES PARTS

A November tour by the Chicago Chapter was held in Clark Equipment Company's Central Parts Division depot. Here the members learned how Clark handles and stores 4½ million spare parts. About 400 members made the trip.

Host John T. Mlynski, division general manager, asked the members to observe three "problem areas" on the tour. Later, at a dinner meeting, the group offered solutions to the problems. These involved use of air rights above bins, pre-packing small parts orders, and moving parts from receiving to storage. Prizes were awarded.

MEET NEW JERSEY PRESIDENT



Richard H. Hopkins, Sr., is president of the New Jersey Chapter for the 1959/60 season. Hopkins is an executive of the General Electric Com-

pany. He is at present Supervisor of Parts Manufacturing in General Electric's Newark Lamp Plant.

SAN FRANCISCO-Stephen C. Traudt, national president, was speaker at the November meeting of the Northern California Chapter. Traudt discussed the

part the material handling engineer plays in effecting a working relationship with all members of his company. One of the material handling man's goals is to teach personnel how to work smarter than harder.

The Twelfth Annual Industrial Engineering Institute will be held February 5 and 6 in simultaneous sessions at Berkeley and Los Angeles. Sponsoring institutions are the Colleges of Engineering, Schools of Business Administration, Institutes of Industrial Relations, and University Extension of the University of California. Both the Los Angeles and Northern California Chapters of AMHS will be among the societies cooperating in this seminar.

MHI CLINIC TO BE HELD IN NEW YORK

New York — An MHI clinic will be held in February with the cooperation of the New York and New Jersey Chapters. Subjects to be discussed are: Modern Distribution; Automation & Application of Computers in Integrated Material Handling Systems; Plant & Warehouse Design for Efficient Material Handling; Economics of Investment Justification in Material Handling Equipment; Integration of Packaging with Material Handling and Distribution Systems.

East Providence - The Narragansett Chapter will resume a series of plant visits at the January meeting. This first meeting in 1960 will be held at Bostitch, Inc. of East Greenwich. Plans have been completed for an evening extension course on "The Fundamentals of Material Handling," to be given on a cooperative basis with the University of Rhode Island, Division of University Extension. The course will consist of 12 weekly classes beginning on September 30. In November, the Chapter heard Robert Brady, Cleveland industrial consultant, speak on plant layout.

OAKLAND—A Fork Truck Rodeo will be held on February 6th at the Oakland Naval Supply Depot. Bob Douglas of Encinal Terminals heads a committee to plan the course for the competition. John H. Brooks, chairman of the San Francisco Chapter of Sa Safety Engineers, is selecting the judges. Fork Truck Rodeo Chairman is Ellis H. Woolley.

FIND OUT HOW

LLIS-CHALMERS LIFT TRUCKS

SAVE YOU MORE... MAKE YOU MORE

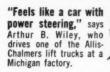
Users say...

"Costs much lower.

Our fleet of 14 Allis-Chalmers lift trucks has made it possible for us to operate at costs much lower than we thought possible," says Al Wil-liams, superintendent of a stevedoring company



"It's a work horse. I like the whole machine everything about it," sums up John Cromer, operator of an Allis-Chalmers truck at a Missouri plant.







"No major engine overhaul under 10,500 operating hours for our 19 Allis-Chalmers lift trucks," says Charles De-shensky, Chief Machinist of a large New York brewery.



MANY MODELS TO CHOOSE FROM

Ask for interesting **CASE STUDIES**



No. 10 - Warehousing No. 11 - Concrete Products

No. 12 - Foundry

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No. 16 - Stevedoring

No. 17 - Metal Working

No. 18 - Lumber Industry

No. 19 - Brewing Industry

-	-	-	CHALMERS				Interes trials
CAP. LBS.	LOAD CENTER INCHES	TIRES	LENGTH LESS FORKS INCHES	WIDTH	WHEEL- BASE INCHES-	OUTSIDE TURN RADIUS INCHES	RIGHT-ANGLE STACKING— PLUS LOAD INCHES
2000	24	Cush.	69	32	42	62	73%
2000	24	Pneu.	77	361/2	461/2	70	831/2
3000	15	Cush.	70%	32	42	64	75%
3000	24	Cush.	745/8	331/4	42	67	791/4
3000	24	Cush.	761/2	38	40	72	841/4
3000	24	Pneu.	88	43	49	86	1031/2
4000	18	Cush.	761/2	38	40	72	841/4
4000	24	Cush.	811/4	38	45	771/2	893/4
4000	24	Pneu.	91	43	49	86	1031/2
5000	24	Cush.	84	39	45	791/2	92
5000	24	Cush.	881/4	42	50	821/2	97
6000	24	Cush.	931/4	42	55	88	1021/2
6000	24	Pneu.	1063/4	651/4	65	111	1311/4
6000*	24	Cush.	951/4	42	55	891/2	. 104
6000+	24	Cush.	951/4	42	55	88	1041/4
7000	24	Cush.	951/2	42	55	89	1103/4
8000	24	Cush.	1001/2	42	60	96	1103/4
10000	24	Cush.	1071/2	46	65	100	1171/2

*Stevedoring Model (available with either 3" or 6" clearance)

Let your dealer show you the advantages of Allis-Chalmers lift trucks. See the yellow pages of your phone book and call him for a demonstration—right in your own plant. Allis-Chalmers, Milwaukee 1, Wis.

ALLIS-CHA



Choice of lifts and masts available. Special mast heights

and lifts can be provided. All models are available with either standard transmission

or POWER SHIFT Torque Con-

verter Drive. For safety in hazardous areas: Under-

writers' Laboratories-approved

GS (gasoline powered), DS

(diesel powered) and LS (LP gas powered) models. Also DX

Safety diesel models (accepted

by Mill Mutual Fire Prevention Bureau) to provide exception-

al protection. Attachments to

fit the need.

Circle 5 on Reader Service Card

New C&D AccuPak*

plates improve battery performance; increase life!

Automatic nuclear control holds plate uniformity to finest possible tolerance; provides 100% inspection!

Electric truck battery users will find three major advantages in C & D Slyver-Clad® batteries containing the exclusive, new AccuPak* plates:

Extra long life—because of longer, thicker plates.

The true final determinant of battery life is the amount of metal in the grids. C&D batteries outlast any other battery because they have the heaviest, thickest plates made. The maximum cross-sectional area grid is cast by a special process that eliminates flaws, shrinkage, cracks, and dross inclusions.

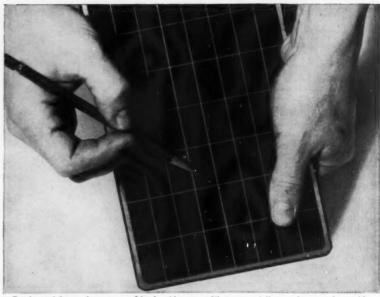
Extremely uniform AccuPak plates; no low cells; high capacity to end of life—due to AccuRay control of pasting.

C&D uses AccuRay** to automatically control the amount of active materials going into the grid structures of both positive and negative plates! C&D is the only industrial battery manufacturer using AccuRay control.

The use of AccuRay to control the pasting operation means that plates have maximum uniformity of weight, density, and thickness of active material. AccuRay controls uniformity to within



Exclusive AccuRay control—another C & D first—once again sets the pace for the battery industry. AccuRay automatically controls weights of all battery plates to a point of uniformity heretofore impractical.



Precise weights and amounts of lead oxides must fill the especially cast battery plate grids to assure the maximum capacity and electrical characteristics.

 $\pm \frac{1}{2}\%$ and automatically subjects every plate to a 100% inspection.

No life-shortening nor capacity drop-off due to sediment build-up—because of Slyver-Clad® insulation and retention.

The longer, heavier, more uniform plates are then wrapped with the time-proven C&D Slyver-Clad five-fold insulation. This consists of a layer of extremely fine parallel glass filaments or sliver, a vertical glass wrapping, a horizontal glass wrapping, a perforated plas-

tic retainer, and finally a microporous rubber separator.

The combination of these five layers of retentive materials virtually eliminates shedding, or loss of active material, with its accompanying life-shortening build-up of sediment in the bottom of the container. Thus, a huge bottom sediment space is not needed. C&D fills this space in standard containers with the heaviest, thickest plates available in any industrial battery.

For full information on C&D Slyver-Clad batteries featuring AccuPak, write for Bulletin IT-530.



Manufacturers of Signer Clast ® Industrial Batteries • PARTICELLE* and PARTICELLE* Batteries for Communications, Control and Auxiliary Power • Producers of Signer ® Silicon Chargers

*Trademark, C & D Batteries, Inc.
**Trademark, Industrial Nucleonics Corp., Columbus, Ohio

Circle 26 on Reader Service Card



A Constructive Critique

The vital need for us to compete more vigorously with the Russian economy has been said many ways, in many months past. The best so far, though, is in a speech by Herbert V. Prochnow, Vice President of The First National Bank of Chicago. The title: "A Time for Critical Decisions". We recommend this as a report on our internal problems as well as a plan to improve our economic position in the world. (We will be glad to provide a limited number of reproductions.)

Mr. Prochnow offers a nine point program with which our nation can maintain its economic leadership. At least two of his points are direct messages to those

responsible for material handling and related functions.

One is the necessity to cut out of government and industry every form of waste and extravagance. Here is included the elimination of feather bedding wherever it exists. He says, ". . . . it is completely inexcusable to waste human lives which are the nation's most valuable resources."

What he's calling for is, of course, a greater degree of cooperation than has so far existed between management and labor in many industries. As we have said so many times, we believe this is largely a matter of education. Individually, we in the material handling industry must spread the word about the benefits of increased mechanization and chop down the gloom and scare spreaders wherever they can be found. It's not enough that we have zeal to improve production methods through better material handling. We have to explain the advantages, to cultivate and welcome discussion at all company and community levels. In our

plants we have to encourage constructive criticism of operations in every area where material handling is applicable.

Another point made in the speech is the need for revision of tax laws relating to depreciation on equipment. It must be made easier for progressive manufacturers to replace obsolete equipment faster than they have been able to, taxwise, in the past. This we need if our industry is to remain the most efficient in the world, producing goods competitively priced with those of any nation.

It seems that now is a good time to talk to our Senators and Congressmen about revising obsolete depreciation concepts. If they are shown, with facts and figures, what better machinery will do for manufacturers they represent, they will listen. All government people are concerned with inflation today. It wouldn't seem to be too difficult to point out what lower priced imports will mean if prices of American goods continue to rise.

If we work on only these two Prochnow points this year, the result will be well worth the effort. Let's make them the basis for a material handling industry

resolution.

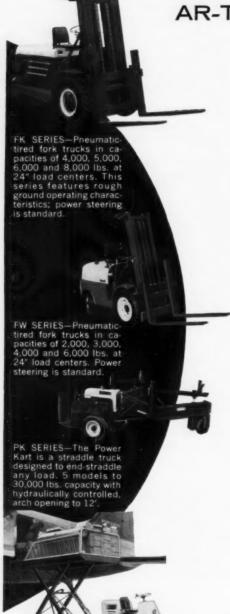
This month, MHE's editors will review 1959's crop of new and redesigned material handling equipment. In preparing this issue we also surveyed equipment manufacturers as to what new developments they expected to see in their segment of the handling field in 1960. We also asked them whether or not they expected to raise their prices in 1960 — and how much, and in what quarter. You'll find their answers on the first page of every section in this issue. We hope this information will help you plan your 1960 material handling program on a sound economic basis.

Ed Lighten
Executive Editor

CHOOSE Erickson POWER LIFT TRUCKS

For Longer Life...Unexcelled Traction...

AR-TIC-U-LA-TED STEERING



Erickson power lift trucks are built rugged. The clean, simple lines follow the natural forms of functional parts. And the parts are known the world over for top performance. Continental engines. Borg & Beck clutches. Warner transmissions. Vickers hydraulic systems. A variety of fork styles, sideshifter, scoops and many other attachments are available.

All platform models feature Erickson's exclusive AR-TIC-U-LA-TED pivot which reduces turning radius to a minimum and has all the agility of 4-wheel steering. Eliminates fast-wearing conventional steering mechanisms. Choose Erickson and you invest in a paying proposition.

There is an Erickson Sales, Parts, Accessories and Service dealer near you. See Erickson list in this directory for name of your nearest contact on page....

ERICKSON the Workhorse of the Lift Trucks

Erickson Hi-Lift Platform
Trucks have various platform sizes and lifts available. Stand-up cockpit
(as shown) or operator's
seat. Standard automotive controls are a feature
of all Erickson Platform
Lift Trucks.

Erickson Kart-All materiel-personnel carriers are available with scissorslift platforms. Airline model shown above
has standard baggage bed, 4,000 lbs

Above is a typical Erickson Low-Lift Platform Truck.

Standard models up to

10,000 lbs. capacity. Custom models up to 20,000 lbs. capacity. Platforms custom built up to 6 ft. wide, up to 24 ft. long.

erickson Kart-All materiel-personnel carriers are available with scissorslift platforms. Airline model shown above has standard baggage bed, 4,000 lbs. capacity. Custom models built with beds up to 8 ft. wide by 24 ft. long, up to 12,000 lbs. capacity. Hydraulic outriggers obtainable for stabilizing Kart-All when loading or unloading heavy loads.

ERICKSON POWER LIFT TRUCKS, INC.

215 St. Anthony Blvd. N. E. Minneapolis 18, Minnesota

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to specification.

KART-ALL-Scissors lift model-Length, width and lift custom-built



1960 FORECAST

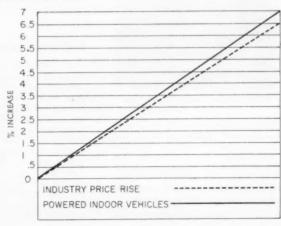
Powered Indoor Vehicles

EQUIPMENT MANUFACTURERS PREDICT .

Startling developments in powered vehicles. Biggest: completely remote-controlled fork lift truck. For automatic warehousing. Other big news. Plastic bodies for personnol carrier line. Manufacturer says: will last longer, look better, need less care. New entry in fork lift truck field. Manufacturer of construction equipment will sponsor fork lift line in '60..... Predicted developments. Greater hydraulic capacity for faster lifting. More compact truck design. Batteries will match - less space, more power. Charging will be simpler. Motor generator maker predicts foolproof electrical controls..... Look for new stacking heights. With heavier loads, too. New line of LP-Gas carburetion equipment will be introduced. Simple installation, service, and operation, says company. Catalytic muffler maker plans use of advance metals. Will work on gas truck handling in controlled humidity warehouses. Radio manufacturer says high-powered two-way unit will be out in '60. Purpose: strengthen radio range. Tire company will announce longer wearing tread compounds. Use for industrial solids..... Other developments. Engine maker will market high-speed diesel truck engine line. Will cover GCW. Truck cab manufacturer will redesign. More comfort and visibility is aim. Lift truck attachments will be emphasized in '60. Truck companies, attachment manufacturers planning refinements. Will experiment with all kinds of handling vehicles. Purpose: increase usefulness with an attachment. Walkie developments. One manufacturer will bring out combination fork and platform unit. Use for stock picking. Another will show light duty, power propelled walkie. Low price will suit small companies' budgets..... Manufacturer adding torque converter to burden carrier. Use: mounting aircraft servicing equipment.

What Will Powered Indoor Vehicles Cost in 1960?

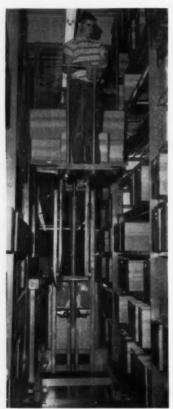
MANUFACTURERS of powered indoor vehicles, when surveyed, were divided evenly as to a definite yes or no concerning price increases in 1960. However, a substantial number of undecided respondents stated that "it depends on whether we have increased material and labor costs." Average prediction of manufacturers who anticipate an increase was 7 percent — half a percent above the average predicted by the whole material handling industry. Some companies specified the quarter in which the increase would come. First and second quarters were evenly divided as to having the most increases. Third quarter dropped off sharply, and fourth quarter showed no increases.



Powered Indoor Vehicles

Dual Platform Truck Lifts Worker, Load

A battery electric lift truck with a dual platform takes loads up to 2,000 lb to a height of 10 ft. The Work-lifter Stock Picker stacks light boxes in racks with top shelf height of 14 ft. The large platform is for the load. A smaller platform for the operator is 6 inches lower. The operator runs the truck and elevates the lift from push buttons on his guard rail. The truck will steer, however, only when the platform is lowered. With the platform raised, the truck runs up and down an aisle, remaining centered by side thrust wheels on the



Circle 141 on Reader Service Card

truck and guide rails on the floor. A clear plastic window in the upright frame permits the operator to see the aisle behind when backing up. The Worklifter Stock Picker uses a 12-volt, 270-amp/hr industrial truck battery. The battery is charged overnight with a selenium rectifier charger.

Economy Engineering Co.



Circle 140 on Reader Service Card

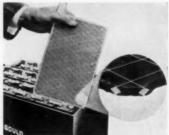
Fork Truck Features Smooth Acceleration

A 2,500-lb capacity electric fork truck features carbon pile drive control for constantly smooth acceleration. Working through a hydraulic circuit, the carbon pile control permits steady, stepless acceleration for inching (delicate load placement). The EC-25 truck gets high torque from dual field windings in the drive motor. High torque provides fast acceleration. Top speed is more than 6 mph forward and reverse. Lift speed loaded is 47 fpm and lowering speed, 80 fpm. The EC-25 climbs a 10 percent grade fully loaded. Turning radius is 64 inches. The contactor panel is in the truck counterweight, protected by a steel cover. The hood and side plates, easily detachable, permit top and side battery removal. Drop down covers expose the carbon pile resistor and hydraulic pump.

Clark Equipment Co., Industrial Truck Division

Battery Lasts Longer

A siliconic battery plate provides 10 to 25 per cent longer life. The manufacturer says its Motive Power Batteries also have improved electrical characteristics. This comes from use of arsenic and silver-cobalt sulphates in the active materials of positive plates. These chemicals migrate to all positive grid members and collect (inset) on the grid members. This forms an insoluble coating to prevent grid separations. It also offers continuous resistance to the corrosive attack of acid and oxygen. To eliminate porosity and insure a grid



Circle 142 on Reader Service Card free of flaws, arsenic is added to the antimonial plate alloy. Gould-National Batteries Inc.

Save up to 60% battery power

WHEN OPERATING IN LOW SPEEDS

with

AUTOMATIC'S

New Skylift Electric Truck
equipped with
CURRENT-MISER-CONTROL

Check for yourself...you'll find that a substantial part of your battery power, while maneuvering in low speeds, is dissipated through heat loss by resistors. Now, Automatic's New Skylift Electric Model ELF equipped with Current-Miser-Control gives you the precise power you need without waste! It achieves low RPM ranges with up to 60% less amperage draw. Result—considerable saving in cost of battery power.

New Cost-Saving Benefits of the CURRENT-MISER-CONTROL

- Up to 60% less current draw operating in low speeds
- Infinite number of speeds
- Lower motor operating temperatures
- Lower cost per battery
- Longer battery life
- More driving power in low speeds
- Increased contactor-tip life
- Increased motor-brush life

Advanced Materials Handling at Less Cost to You

Electric
Industrial Trucks

AUTOMATIC'S Model ELF Electric Truck

has been designed for operation in plants and warehouses requir-

ing a highly maneuverable and efficient industrial truck, with fast travel speed and lift speed. Example—4,000-lb. model, loaded,

AUTOMATIC TRANSPORTATION COMPANY

Division of the Yale & Towne Manufacturing Company
141 West 87th Street, Dept. A-0, Chicago 20, Illinois
WORLD'S LARGEST EXCLUSIVE BUILDER OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS

Please rush complete information on the Skylift Model ELF with revolutionary new Current-Miser-Control.

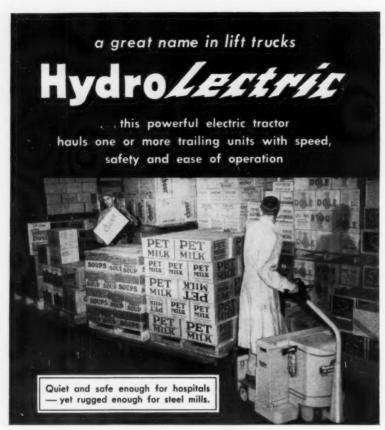
Name_____Title_____

Firm Name

Address

City & Zone State

Circle 9 on Reader Service Card



The one big difference in lift trucks is the exclusive

Dyna-Dual Power Unit

of the Hydrolectric



- Two Drive Wheels instead of one
- 12-18-24 Volt Operation
- Alloy Gear Transmission instead of chains
- 100% more Steering Ease— Greater Maneuverability
- 50% less Maintenance Easy Accessibility
- Finger-Tip Control —
 Greater Safety

Hydrolectric moves more goods, quicker, easier and safer anywhere at less cost.



A TRUCK FOR EVERY PURPOSE AND MATERIAL



Circle 128 on Reader Service Card

POWERED INDOOR VEHICLES

(continued)

Tire For Rugged Duty

An industrial pneumatic tire has been designed with a two-ply shield of steel cables under the tread. This



Circle 143 on Reader Service Card

protects against premature carcass failure and resists cuts, punctures and bruise breaks. The Steel Protected Industrial Pneumatic is for extremely rugged service in steel mills, scrap yards, glass works, and similar industries. The all purpose tread makes for extra traction. The tire comes in six sizes, from 6.00 x 9 to 8.25 x 15.

The B. F. Goodrich Co.

Features 2 Batteries

A walkie comes with two batteries to cut down on recharging time. Both batteries recharge from the same built-



Circle 144 on Reader Service Card

in unit which plugs into a 110 AC circuit. The walkie handle in upright position operates a dead man brake. A spring keeps the handle upright when unattended. The power driven wheel is spring suspended for good contact with all types of floor. This walkie moves 3,000 lb gross vehicle weight. The lift handles up to 1,500 lb. A fluid drive clutch applies smooth power, forward and reverse.

West Bend Equipment Corp.

Stacks In 6-Ft Aisles

This fork lift truck is designed to stack in aisles as narrow as 6 ft, Model Before you buy any battery

LOOK AT THE **OTHER SIDE** OF THE

PRICE TAG!

WHY EDISON IS THE HIGHER-PRICED BATTERY THAT COSTS

- 1. Longer life lower depreciation
- 2. Reduces maintenance cost 3. Durable — no sudden failures
- 4. Full shift performance
- 5. Fully automatic charging
- 6. No corrosive fumes 7. Lowers cost of truck operation
- Can stand idle indefinitely 9. Withstands temperature
- extremes 10. Other uses after heavy duty life
- 11. Lighter weight

12. Edison Nationwide Service

The EDISON Nickel-Alkaline battery was created for those who will make a higher initial investment for a battery that will give many more years of trouble-free performance . . . and will actually cost less in the long run. Write Storage Battery Division, Thomas A. Edison Industries, West Orange, N. J. for

Edison representative. In Canada: Canadian Line Materials. McGraw-Edison Company (Canada) Ltd.

booklet . . . or contact your local

U. S. PATENT 2,871,281

Toronto 13, Ontario.

New active material gives Edison even longer life . . . even greater durability

EDISON NICKEL-STORAGE BATTERIES



Another

Product of

7-FT. AISLES

Now you can have them... without obsoleting your present racks or pallets



Operates from the aisle . . . forks reach right into the rack to pick up or deposit loads, extending 24" and back in seconds.

This is not a "beefed-up" model of a truck designed 10 years ago . . . but a brand new 4,000 lb. unit . . . built from the ground up to withstand tough, continuous performance, at fast speed, fully loaded, indoors or out . . on long ramps . . . on slippery or uneven floors . . . and in narrow RAYMOND aisles. Operates hour after hour, day after day with minimum maintenance—there is no other truck like it! Send for bulletin.

Ask about Raymond's lease-rental plant

The RAYMOND CORPORATION

3396 Madison St., Greene, N.Y. Please send new 4000 lb. Reach-Fork bulletin

NAME	TITLE
COMPANY	
STREET	
CITY	STATE

Circle 116 on Reader Service Card

POWERED INDOOR VEHICLES

(continued)

590 can lift a 4,000-lb load 70 fpm. Hydraulically-operated outriggers permit the front end assembly to turn 90° in either direction. The vehicle



Circle 145 on Reader Service Card

can be used as a traditional fork lift truck. A special drive eliminates clutch assembly, transmission, drive line, differential, and all shifting. The drive provides immediate forward and reverse movement through the foot pedal. The truck comes in gasoline and LPG models.

Towmotor Corp.

Turn Radius Is 67"

A 3,000-lb capacity lift truck is designed with great maneuverability. Outside turning radius of model FTB 30-24 is 67 inches. Center point steer-



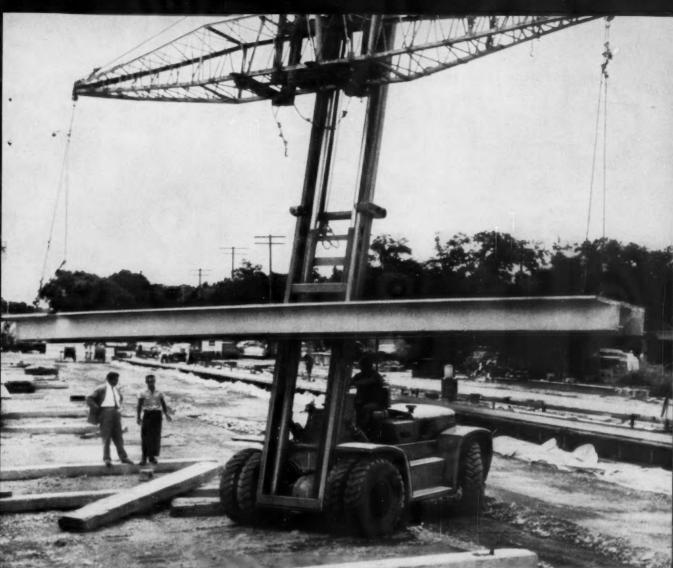
Circle 146 on Reader Service Card

ing allows the driver to turn in a minimum radius in either direction. An extra lift roller mounted mast provides maximum stacking height with minimum overall lowered height and greater free lift. The heavy-duty engine is available in gas or LPG models. There are two transmissions, standard 2-speed constant mesh or torque converter. Attachments include: cotton clamps, paper roll clamps, side shifters, or mechanical crane arms and rams. Optional equipment: load back rests, overhead guards, water mufflers, and other safety equipment.

Allis-Chalmers

Capacity Is 5,000 Lb

A four-wheel-drive, rubber-tired tractor shovel, Model H-50, has 5,000



Yale G-3 gas trucks are specifically designed to handle the toughest assignments in the 15,000 to 20,000-lb. area. Their heavy-duty ruggedness is ideal for rough or smooth terrain. With the G-3 Gas Truck, maximum visibility is assured through exclusive dual lifting cylinder design—300% greater visibility than any other truck of its type. The G-3 Gas Truck also gives maximum maneuverability and stability, due to a low center of gravity

combined with rugged upright channel design. The G-3 turns easily, especially in tight areas.

For full information, call your Yale representative or send for free brochure #5230B to The Yale & Towne Manufacturing Co., Materials Handling Div., Philadelphia 15, Pa. Dept. GTS.

Yale Materials Handling Division, a division of The Yale & Towne Manufacturing Company. Manufacturing Plants: Philadelphia, Pa., San Leandro, Calif., Forrest City, Ark. Products: Gasoline, Electric, Diesel and LP-Gas Industrial Lift Trucks Worksavers · Warehousers · Hand Trucks · Industrial Tractor Shovels · Hand, Air and Electric Hoists

YALE

INDUSTRIAL LIFT TRUCKS
TRACTOR SHOVELS · HOISTS

YALE & TOWNE

POWERED INDOOR VEHICLES

(continued)

Ib capacity. Features: more power available for hydraulics and traction, more efficient torque-converter, complete power-shift transmission, power-transfer differentials, power steering, pry-out bucket action, safety boom arms, power-boosted brakes, and many refinements. Powerful gasoline and diesel engines provide from 90 to 92 hp. A large capacity oil bath air cleaner protects against dust. A cartridge-type oil filter is built into the hydraulic reservoir. Similar filters protect engine oil, transmission and torque-con-



Circle 147 on Reader Service Card verter oil. The front service brakes are sealed to keep out dirt. The Frank G. Hough Co.

Uses Carbon Pile Control

Carbon pile speed control provides smooth travel with infinitely variable travel speeds. It reduces maintenance by eliminating speed contractors, complicated master switches, and resistance boxes. This line of electric-powered trucks, the F-50T, comes in 4,-000, 5,000, and 6,000-lb models. The



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truck also provides accurate inching plus fast acceleration. Maneuverability permits right angle stacking aisle of only 93 inches plus the length of the load. The minimum intersecting aisle is less than 6 ft. Top travel speed is 8 mph. All models feature 20 percent higher lift speeds, exceeding 40 fpm.

The Elwell-Parker Electric Co.

Pedal Frees Hands

This shows the Monotrol lift truck control system which combines throttle, forward, and reverse in one right pedal. This frees the driver's



Circle 149 on Reader Service Card

hands for steering and load-handling. Monotrol is available on the Space-Saver 30, 40, and 50 models. Dash buttons on the left operate an automatic parking brake and Power-Shift Hystamatic transmission. The brake pedal on the left is for inching, to provide precise control of movement while engine speed is maintained for fast lifting. An automatic brake engages whenever the engine stops.

Hyster Co.

Improved Lift Trucks

A line of gasoline and LPG powered lift trucks comes in 3,000, 4,000, and 5,000 lb capacity models in cushion or pneumatic tire types. The line features advances in power transmission, mast construction, compactness, operating speeds, stability, and main-

(continued on page 37)



5737 WEST PARK AVE. . ST. LOUIS 10, MO. . MISSION 7-1138

Circle 76 on Reader Service Card



Should you . . . or shouldn't you use pallets?

ELIMINATING PALLETS...appears to offer obvious savings. The many new attachments in use for this purpose makes the idea even more attractive. However, many possible pitfalls face even the experienced materials handling man.

YOUR DECISION should be based on a careful analysis by specialists who have had broad experience with such conversions. Your local Clark dealer, for example, is able to offer you not only his own specialized knowledge, but in addition, that of a team of Clark engineers who have dealt with countless companies on the same subject.

THE COMBINATION of specialized knowledge, a complete line of equipment (including all

power types), plus a full line of job-engineered attachments, gives your Clark dealer an opportunity to present you with a completely unbiased, and carefully documented recommendation.

REDUCING COSTS is of prime consideration. The elimination of pallets in your operation may prove to be the quickest, soundest way of accomplishing this objective. It's worth investigating. Contact your local Clark dealer, listed in the Yellow Pages under "Trucks, Industrial"

or, if you prefer, write: Engineering Aid, Clark Equipment Company, Battle Creek, Michigan.



YOUR ELECTRIC BATTERY

Exide Industrial Division, The Electric Storage Battery Company, Philadelphia 20, Pa.



Electric Truck Annual Savings over gas trucks

approximalely
400 -4500
average

1940

approximately 1000 - 1500 average

TODAY

?

FUTURE

Why miss out on these economies? See how electric truck savings have grown since 1940. You could be saving money right now. And if this trend continues, you can save more every year in the future.

EASE THE PROFIT SQUEEZE

Electric Truck Economy Over Gas Keeps Growing and Growing

Even way back in 1940, Exide-battery-powered industrial trucks were roughly 30% more economical than gas-powered trucks. Today they're roughly twice as economical. And the trend suggests still greater economy in the future.

Inflation has driven the cost of most things up sharply. But in the field of materials handling, it has actually favored electric industrial trucks. Examine the three main ingredients of industrial truck cost: fuel, maintenance and depreciation.

The ingredients of truck cost

The cost of gasoline has gone up about 80% since 1940. But the cost of battery power is still at about the same level. This is partly because the cost of electricity itself has actually decreased. And new batteries and chargers give you more capacity and life per dollar of cost.

Maintenance labor rates and parts prices have gone up for both types of trucks. But electric trucks need less than half the maintenance that gas trucks do. Depreciation has always been lower for electric trucks and still is. This is the result of longer useful truck life—estimated to be from 2 to 3 times as great as that of gas trucks.

New batteries mean improved performance

Today's electric industrial trucks not only offer greater relative economy than ever before, but also the highest performance ever. The combination of advantages makes them today's best materials handling bargain. Two years ago Exide introduced new improved truck batteries that pack more power into the same space and offer longer life of service. This means that every truck

can carry more power capacity for longer work shifts, longer runs, and higher productivity.

Typical savings

Records of thousands of trucks in a wide variety of typical applications indicate that average economies for electric trucks total up to \$1500 per truck per year as compared with gas-powered trucks. Why don't you help your company "ease the profit squeeze" by putting electric trucks to work saving you money right now. Exide's plan for leasing batteries and chargers makes it possible to switch with a nominal capital investment.

For data that will assist you in analyzing your own operating costs, write for free copy of 14-page Form 6262

New batteries . . . new chargers. Get the complete Exide power package. 50 years of constant improvement have gone into today's Exide-Ironclad Battery. New materials and advanced construction give it more power and longer life potential than ever. New vertical chargers save 3/3 floor area mounting space. Maintenance is easier and less costly. Get both battery and charger from Exide. Save both ways.

For details on the new Exide-Ironclad Batteries, write for a copy of 8-page Illustrated Brochure 6230



Batteries, write for a 6-page illustrated Brech

Circle 40 on Reader Service Card



NEW MONARCH DEVELOPMENTS STOP PREMATURE RIM SEPARATION!



MONARCH SOLIDS FEATURE NEW COMPOUND AND BONDING PROCESS ... REDUCE REPLACEMENT COSTS

Three common causes of premature solid tire failure are embedded metal scrap, chemicals and excessive heat. Each attacks and destroys the bond between tire and rim. Result: rim separation, severe tire damage, high replacement costs.

MONARCH engineers have solved this problem by combining a new, extra tough, natural rubber stock, Compound T-5100, with an advanced rubber-to-metal chemical bonding process. Extensive field tests have proven that MONARCH tires now feature unprecedented resistance to rim separation caused by the above factors.

That's another reason why dollar-conscious buyers specify MONARCH industrial solids to cut replacement costs.

FOR ADDITIONAL INFORMATION . . . write direct or see your nearest Monarch dealer.



MONARCH

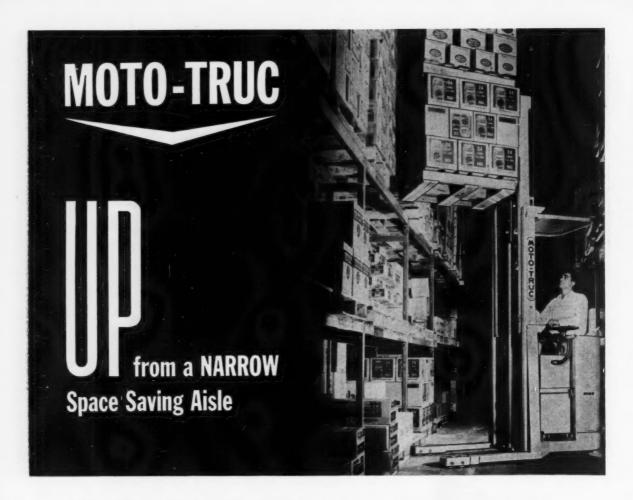
210 LINCOLN PARK HARTVILLE, OHIO 7-225 General Motors Bidg. Detroit, Mich.

2353 No. California Ave. Chicago, III.

Western Warehouse: Reno, Nevada



Circle 123 on Reader Service Card



• Here's a truck that will cut wasted aisle space. It's MOTO-TRUC's Hi-Lift outrigger model a small rider model designed for ceiling high stacking from aisles as narrow as six feet wide, depending on load length. It does the job without sacrificing capacity, safety or speed.

Exclusive "Magic Circle" steering provides four wheel support for stacking stability at full elevation. There are no stabilizing casters to whip or wobble and no complex steering linkages to restrict maneuvering.

Other important features include rugged all welded frame construction, foolproof operator

controls . . . plus the famous MOTO-TRUC drive unit that is efficient, dependable and easy to maintain.

Most important of all, this MOTO-TRUC is the lowest cost rider type high stacking truck you can buy. It not only costs less to buy but operating and maintenance costs are lower too.

Write for complete information on the MOTO-TRUC Hi-Lift outrigger in capacities to 4,000 pounds.

The MOTO-TRUC Co.

1955 E. 59th ST. CLEVELAND 3. OHIO

MAGIC CIRCLE STEERING-another MOTO-TRUC design exclusive.

All MOTO-TRUC high stacking rider models use Magic Circle steering for solid four wheel support that assures stacking stability and maximum maneuverability.

Here's How It Works:

ovided with ring gears connected by a floating idler. The idler is sitioned off-center so that the point of contact between idler and ig gear is always increasing on one wheel while decreasing on the her. This action provides perfect steering geometry through a full turn either to right or left.

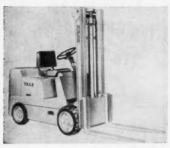
The MOTO-TRUC Company

CLEVELAND 3, OHIO

POWERED INDOOR VEHICLES

(continued)

tenance. Standard equipment is an automatic torque transmission to do away with manual gear changing. For inching, the left pedal is a combination inching and brake unit. The



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right pedal is for brakes only. The 3,000 lb capacity cushion tire truck turning radius is 70 inches. Rugged masts consist of two nested I-beams with extra thick flanges for longer wear. The seat is 37½ inches from the ground, placing the top of the average operator's head below the top of the popular mast heights.

The Yale & Towne Manufacturing Co.

Yale Material Handling Division

For Narrow-Aisle Trucks

A Slyver-Clad battery is specially designed for the new narrow-aisle, stand-up electric industrial trucks. The Type 12-HG-9 has all features of the



Circle 151 on Reader Service Card

firm's motive power line. This includes construction that reduces shedding and sediment build-up; greater cell uniformity, and Hi-Impac cell covers and containers to reduce accidental breakage or damage. Capacity is 480 ampere hours at the six-hour rate.

C & D Batteries Inc.

Steers Like 4-Wheel

A versatile utility truck can pull up to 4,000 lb or, with scissors lift, raises up to 4,000 lb. The Kart-All has a special pivot that gives the effect of four-wheel steering. The scissors lift has load wheels directly underneath for stability. The canopy and aluminum extension ladder, which raises and lowers with the platform, can be removed. The Kart-All has power



Circle 152 on Reader Service Card steering as standard equipment. It also features a short turning radius. Erickson Power Lift Trucks Inc.

Boost Power Of Trucks

A new line of high-capacity storage batteries boosts the power of electrical industrial trucks. Four new models pack up to 45 percent more power per battery. They contain armored



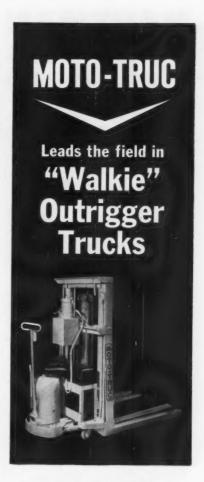
Circle 153 on Reader Service Card

porous tubing which better diffuses the electrolyte and aids the passage of current. Advantages: (1) heavier workload handled per shift, (2) smaller physically sized battery needed, (3) less frequent charging needed, and (4) fewer battery types and greater interchangeability. Model RG (photo) is 20½" high with cover, developed for low-silhouette trucks. It replaces a battery 24½" high. Each positive plate of the RG is rated at 55 ampere-hours, compared with 50 ampere-hours for its predecessor.

Exide Industrial Division The Electric Storage Battery Co.

Goes Any Direction

A fork lift truck travels in any direction, at any angle, with any shaped load. That's the Crab, with steering which allows moving in any direction. One control lever operates the steering and twin drive motors. The truck goes forward and reverse without using the steering wheel which is used for angle and side steering. The Crab, 65 inches over-all length, turns



An easy handling stacker ... priced below competition

• This rugged walkie MOTO-TRUC is designed to stack from aisles less than 6 feet wide. Its four wheel suspension assures stacking stability while the articulated drive wheel provides maximum traction.

Available in both telescoping and non-telescoping models with standard lift to 152". Capacities up to 4,000 pounds.



1955 East 59th St. * Cleveland, O.

Circle 70 on Reader Service Card

HARTMA

EXIRACK

COMPLETE ADJUSTABILITY

solves storage problems.

POWER DOCK

Unique 30" in and out motion

plus 24" up and down . . . to serve any type truck quickly and safely.



CALMAN METAL FABRICATORS 131 Murray Street, Rochester 6, N. Y.

Please send literature on-

	FLEXIRACK	POWER	DOCK	BOOSTER
Na	me			
Fire	n	***********		
Str	eet			
	/			State

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POWERED INDOOR VEHICLES

(continued)

completely in 70 inches. It moves 5 mph light, 4 mph loaded. It lifts 32 fpm light, 22 fpm fully loaded. The



Circle 154 on Reader Service Card

reach-type fork attachment permits load swing 30° each side of center. A tilt device is optional, for cradling the load.

Automatic Transportation Co.

Lifts All Drum Types

A fork mounted drum lifter handles all types of standard steel drums, open or closed top. The gripping jaws will



Circle 155 on Reader Service Card

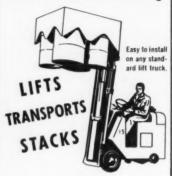
not damage the drum. A manual release avoids dropping drums pre-maturely. Lifting capacity is 2,000 lb. It attaches or removes in seconds.

Modern Light Metals Inc.



Circle 107 on Reader Service Card

Safe DRUM Handling



DRUM CARRIER

- Alignment compensator automatically places drums into gripping position. Carrier loads over drums. Gravity action causes gripping shoes to securely hold load. Release can only be effected by application of hydraulic reser
- nerease can only be enected by application of hydraulic pressure. Standard models handle standard 5-gallon drums in diameters from 22½" to 24¾", and permit 6" variation in height in same load. Special types available for Monorail, Crane, and other applications.



WALZ & KRENZER, Inc. 22 Flint Street, Rochester 8, N.Y.



NEW CONCEPT IN BATTERY CHARGING!

The La Marche Silicon Recharger is Self-Operating . . . Self-Regulating Fully Automatic . . . Practically Fool-Proof.

No Moving Parts.

More than 70 standard types avail-

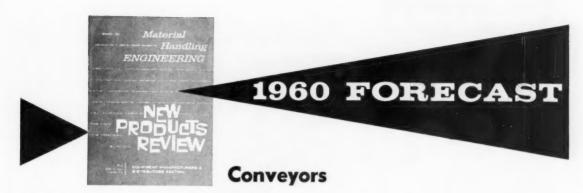
Can be wall-mounted, floor-mounted, battery-mounted, or truck-mounted.

Made by pioneers in the development of Silicon self-regulating units. Over 18,000 in use today.

Get the facts on this remarkable development. Write today!

La Marche Mfg. Co. Inc. 3957 25th AVE. . SCHILLER PARK, ILL.

Circle 67 on Reader Service Card MATERIAL HANDLING ENGINEERING

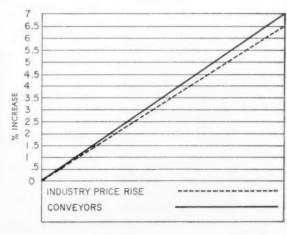


EQUIPMENT MANUFACTURERS PREDICT

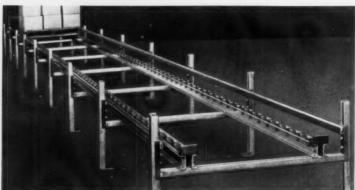
Big developments in electronics. Engineered conveyor manufacturers say electronics has tremendous future. More automatic operation coming up. Needed because production requirements have speeded up. More automatic switching, preset signals, central controls will offset labor costs. Manual transfer of materials from lines too costly. Electronics manufacturers will expand transistorized controls, counters.... Standardization. Big factor in pre-engineered conveyors. Standard components will be made flexible to fit many applications. These manufacturers say: do-it-yourself will be trend. Examples of standardization. Interchangeable parts to save cost. Simplification of design to use more standard shapes. Saves labor in fabrication and on the job. Other plans by manufacturers. New light duty vibrator series with variable frequency adjustment. Refinement of an overhead power and free conveying system for storage. Lightweight wheeled live-storage system will be geared to soft goods fields. Belts with greater flexibility to accommodate smaller pulleys in use. Developments in conveyor wheels planned. Cold curing rubber compound for repair will be improved — it'll stand heat up to 300 degrees F. Used to repair belts in hot operations. Another manufacturer will expand into overhead cable conveyor field. More plans. Manufacturer will expand uses of vibrating conveyors. For automatic deburring, cleaning, polishing. Another company will emphasize overland rope belts. In sand & gravel plants & quarries. Easy set-up, low cost claimed. Manual tabulation equipment will have higher speeds for warehousing. Developments in power transmission.

What Will Conveyors Cost in 1960?

MORE THAN TWICE as many conveyor manufacturers predicted a price increase in 1960 than did not. Average increase according to the survey was 7 percent, half a percent above the total average for the whole material handling equipment industry. A number of manufacturers were undecided. But they admitted that, if steel prices went up, conveyor prices would have to rise also. Predicted increases were fairly well spread out through the first three quarters of 1960, with very few shown in the fourth quarter. Some electronics components makers, however, said that design improvements in their products would forestall price increases.



Conveyors



Circle 156 on Reader Service Card

Conveyor Handles Pallets

The Palletflo pallet conveyor is a gravity unit capable of handling up to 3000 pound pallet loads at slopes as low as ¼ inch per foot. It consists of rails, adjustable supports on 5-foot centers, and side rails which are adjustable in width and elevation. The conveyor is available to fit a variety of pallet width, weight, construction, and can be end or side loaded. Main members are galvanized steel.

M-H Standard Corp



Circle 157 on Reader Service Card

Case Counter Works on Gravity Conveyors

A mechanical case counter is designed for use with almost any Rapistan wheel conveyor. Capable of counting up to 99,999, the counter is installed from the top of the conveyor; it will fit any standard straight section or curve of wheel conveyor on 3-inch centers, except a conveyor 24 inches wide with 28 wheels per foot. A knurled knob permits resetting of the counter back to zero. In all installations there must be at least a 2-inch separation between cartons to get an accurate count. Recommended locations for installation of the counter include: the beginning of the line where loading is accomplished, after a power conveyor, or on a curve.

The Rapids-Standard Co. Inc.

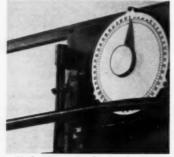
Dispatcher Controls Container Routing

A dispatcher at a control console can direct tote boxes, cartons, and other containers to selected stations on a conveyor line. The Model 450 automatic conveyor routing system will direct containers to packing stations for broken lot assembly, or it will direct work through various processing stations. Either single containers or trains of containers can be handled. The dispatcher selects the routes by depressing station keys; coded instructions are automatically placed on the container by an inking printer.

Atronic Products, Inc.



Circle 158 on Reader Service Card

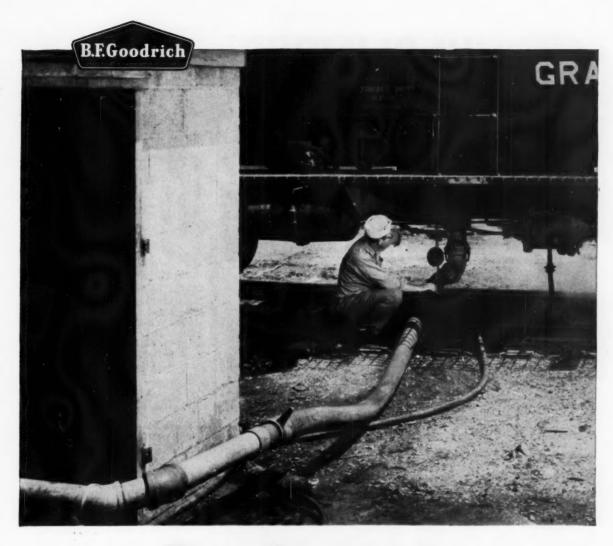


Circle 159 on Reader Service Card

Automatic Towline Switching

The sWitch-Cart 600 automatically dispatches and switches towline carts used with in-floor and overhead systems. You set the dial and place the cart on the towline. The cart goes to its destination, switches off the power line and accumulates. The system is described as fast, accurate, low cost, and maintenance-free. It can be used in new or existing freight handling, warehousing, and manufacturing operations.

SI Handling Systems Inc.



Pass the syrup a carload at a time

B.F.Goodrich improvements in rubber brought extra savings

Workers at this candy company were having a terrible time unloading corn syrup through metal pipe. Getting the tank car in just the right spot to make the hook-up took a lot of time. The rigid pipe was heavy, hard to maneuver, a strain to connect.

Company engineers knew that rubber hose would be easier to handle, but would rubber change the taste of the syrup? They took the problem to a

B.F.Goodrich distributor, and a special hose was developed.

The rubber B.F.Goodrich used for the lining has no odor, doesn't affect the taste of the syrup. The cover is extra tough, can be dragged over rough ground, can stand all sorts of weather.

The B.F.Goodrich hose has been on the job two years now, is expected to last five more. Because it's so much more flexible than pipe, it can be connected in a hurry. No need to jockey tank cars back and forth. It's faster to hook up, too, because special handles are built into the couplings, eliminating the need for wrenches.

Your B.F.Goodrich distributor has complete information on the B.F. Goodrich hose described here. And, as a factory-trained specialist in rubber products, he can answer your questions about the many products B.F.Goodrich makes for industry. B.F.Goodrich Industrial Products Co., Dept. M-764, Akron 18, O.

B.F.Goodrich industrial rubber products

JANUARY, 1960

Circle 51 on Reader Service Card



"HI-CLIMBER"

"SKY-KLEET"

Two Ways to Save... on Handling Costs!

"HI-CLIMBER"®

Heavy-duty incline conveyor belting.
Used for handling cartons, boxes, baskets, bags, cans, etc., with the consistent
reliability that means low conveying
costs. Special diamond-impression nonslip surface keeps packages in place
on inclines up to 40°. Widths up to 44".



"SKY-KLEET"®

Specially-designed rubber cleats available on Goodall Conveyor Belting used for handling packages, small parts, stampings, minerals, chemicals, etc., on fixed or portable conveyors. Cleats are integrally molded to the belt. Standard spacing—multiples of 12 ^{II}. Special spacing on request.



"If it's GOODALL, it MUST be Good!"

Contact Our Nearest Branch for Details and Prices

Standard of Quality—Since 1870



GOODALL Rubber Company
GENERAL OFFICES, MILLS and EXPORT DIVISION, TRENTON, N. J.

Circle 133 on Reader Service Card

CONVEYORS

(continued)

Conveyor Does Double Duty

A floor conveyor can adapt to use as an assembly table by inverting the slider bed and attaching side leaves. Ordinarily, it is a slider bed, trough



Circle 160 on Reader Service Card

type, or table type. Bed sections are made of 12-gauge sheet steel with sides 2 inches high. The belt is 3-ply canvas solid woven, 8, 12, 14, 16, 20, and 24 inches wide. The drive is a 1/3 hp motor with worm gear reducer and heavy duty snub roller.

A. B. Farquhar Division The Oliver Corp.

Vibrating Feeder

A new heavy duty feeder has been added to this line of electric and mechanical vibrating units. The No. 6



Circle 161 on Reader Service Card

feeder has a capacity of 1000 tons an hour, and is suited for controlled feeding from bins and hoppers to belts, crushers, pulverizers, kilns, grinding mills, scales, and other processing equipment. The 6-D is equipped with 60 x 90 inch open pan deck and renewable liner.

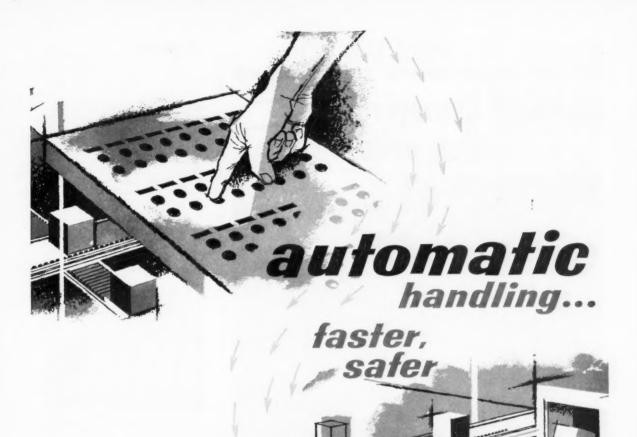
The Jeffrey Manufacturing Co.

Cleans Belt Return

A spring type belt cleaner removes material from the returning belt. This material otherwise would be ground into the belt by the snub pulley and



Circle 162 on Reader Service Card



ANOTHER REASON WHY INDUSTRY MOVES
BETTER ON ALVEY-ENGINEERED CONVEYOR SYSTEMS

Automation doesn't necessarily involve extensive plant-wide integration of materials movement. Alvey comes up with many ingenious ideas and methods that automate materials handling of segments . . . lines . . . and departments within plants.

Alvey conveyor engineers keep their eyes on that returnable dollar. They create "pushbutton" movement of packaged goods and separate components—that not only saves time and manhours in the long run, but provides immediate returns on investment. Call us in to talk it over . . . no obligation!

ALVEY ... serving these famous names and many more

Philip Morris
Fairbanks Morse
Hiram Walker
Anheuser-Busch
Knox Glass
Pet Milk
ACF Wrigley
Pepsi-Cola
United States Steel

ALVEY

CONVEYOR MANUFACTURING COMPANY 9299 Olive Street Road • St. Louis 24, Mo.

ENGINEERED CONVEYOR SYSTEMS • PALLET LOADERS AND UNLOADERS • VERTICAL LIFT CONVEYORS ROLLER, BELT, APRON, PUSHER BAR, SPIRAL, AND SLAT CONVEYORS • PACKAGE HANDLING SPECIALTIES

Circle 11 on Reader Service Card

Multi-plant conveyor conversion problem solved with



Gould-National makes full conversion in 90 days

Gould-National Batteries, Inc., makes batteries for hundreds of sales organizations, each having its own color combinations in trade marks and brand names, some requiring as many as three distinct shades. And Gould-National, to insure distribution of fresh batteries everywhere in the country, manufactures in 16 strategically located plants throughout the United States.

Battery manufacture is a highly standardized, mass-production operation. Economical application of painting multiple colors on the cases posed real problems in methods and equipment. The conversion at Gould-National required equipping 16 plants simultaneously with painting equipment and conveying systems coordinated with existing production lines.

Methods engineers at Gould-National made the multi-plant conversion in the record time of 90 days . . . using Standard Conveyor stock units, including Handidrive power unit, with big savings in cost. And what do these engineers say about Standard Conveyor? "Best possible method for our type of operation!"



Illustrated are scenes from the St. Paul plant of Gould-National. Line was designed to produce 3,000 multicolored batteries in 50 different sizes and colors per day.

When you have a materials-handling problem, call Standard — more than 50 years of conveyor engineering experience. Standard Conveyor Company, General Office: North St. Paul 9, Minnesota.

S



Call the Standard engineer listed in your classified phone directory or write direct for Bulletin 309 —address Dept. A-1.



Soles and Service in Principal Cities
Circle 96 on Reader Service Card

CONVEYORS

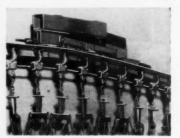
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return rollers or caking build-up on the snub pulley would cause dangerous belt stresses. The cleaner is a row of thin, spring steel wiper blades with individual pressure springs. The blades overlap, wiping clean the carrying surface. Blade pressures are low for negligible belt wear. There's a cleaner for any width belt.

Stephens-Adamson Mfg. Co.

Conveyor Lowered and Raised

Ride-A-Track is a conveyor system in which the cable link is raised and lowered as desired. This Limber Dip



Circle 163 on Reader Service Card

feature allows a proper working height for unloading the conveyor at all times. The Ride-A-Track system is primarily used for unloading poultry. Dearborn Fabricating & Engineering Co.

Merry-Go-Round Crane

This double bridge, 10-ton power operated monorail crane is equipped with a circular track carrier. Carrier



Circle 280 on Reader Service Card

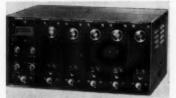
consists of two 5-ton electric hoists and monotractors for propulsion 360 degrees. Long, heavy loads can be spotted anywhere beneath the crane bridge and within inches of the end approach. Control of all movement can be maintained from either the cab or from push-button station at the floor.

American MonoRail Co.

Counter Redesigned

An electronic batch counter, Tally-Count, has been redesigned as a complete material handling instrument. It

is available with a wide range of plugin sensing devices. Some of these are: double and triple pre-set decades that furnish warning signals before coun-



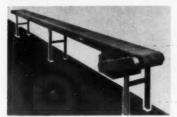
Circle 281 on Reader Service Card

ter is reached; photoelectric amplifiers which convert signals into counting pulses at speeds up to 100 per second; photoelectric sensing units, which count and inspect production parts without contacting the material controlled.

Standard Instrument Corp.

Conveys in High, Low Temperatures

This roller bed conveyor with flat wire mesh belt is especially suited for handling articles above or below nor-



Circle 282 on Reader Service Card

mal temperatures. It is engineered and constructed in unitized design. Two models are available: one is equipped with center drive and take-up and fixed end pulleys; the other has end drive and end take-up. Supplied in lengths to suit requirements with standard belt widths of 12, 18, or 24 inches.

Conveyor Specialty Co. Inc.

Turntable Easily Disassembled

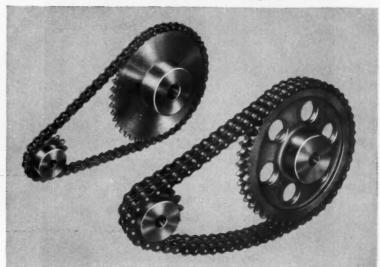
This line of turntables features ease of assembly and disassembly on the job. It is designed for both permanent



Circle 283 on Reader Service Card

and temporary installations. The turntables are available in standard sizes up to 16 feet in diameter, having load-carrying capacities up to 3 tons. Installation or removal of 12 bolts com-

DO YOU HAVE THE PROPER CHAIN SELECTION FOR YOUR EQUIPMENT?



If there is a question in your mind about the correct size of chain to use for your particular installation, save time and money by consulting ACME Engineers at once. They will assist you in selecting the proper chain drive. In many instances, this depends on how much horsepower you want to transmit . . . the speed and size of your shaft . . . space limitations . . . hours of continuous operations, etc.

These are problems on which our engineers can draw from their many years experience to give you the correct answers.

Consult your nearest ACME Distributor or write our Engineering Department for the answer to your CHAINING PROBLEMS.



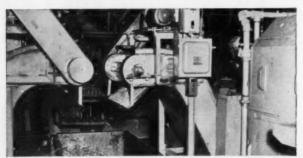
Write Dept. 29-E for new 100-page illustrated technical catalog including new engineering section showing 36 methods of chain adjustments.



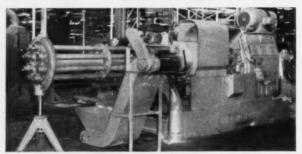
COMPLETE LINE OF ROLLER CHAINS AND SPROCKETS . DOUBLE PITCH CONVEYOR CHAINS . STAINLESS STEEL CHAINS . CABLE CHAINS . FLEXIBLE COUPLINGS . STANDARD AND SPECIAL ATTACHMENTS

Circle 1 on Reader Service Card

MAY-FRAN CHIP-TOTES



PROVIDE AUTOMATIC AND



CONTINUOUS SCRAP REMOVAL



FROM ALMOST EVERY TYPE AND SIZE OF MACHINE TOOL

Here is a machine tool accessory that will cut production costs, and permit longer "run" times for your automatic machines. The MAY-FRAN CHIP-TOTE continuously removes the chips, turnings and borings from machines. The conveyor can be synchronized with the metal removing capacity of the machine. Scrap is channeled onto the CHIP-TOTE belt, carried clear of the machine for discharge into tote box or carry-off conveyor system. There is a CHIP-TOTE for every machine tool.



1611 Clarkstone Road, Cleveland 12, Ohio

Circle 75 on Reader Service Card

CONVEYORS

(continued)

pletely assembles or disassembles the unit. A 2-man crew can completely install the largest standard unit in less than ½ hour.

Anchor Steel and Conveyor Co.

Portable Belt Booster

The Styl-O-Veyor is a portable belt booster composed of two independently controlled conveyor sections.



Circle 284 on Reader Service Card

When in fully elevated position (35%), the conveyor's discharge elevation is 13'8". It eliminates strain of lifting a commodity from one level to another. Its self-driven pulley eliminates hazards to exposed chains, sprockets, etc.

Island Equipment Corp.

Conveyorized Assembly Table

This newly designed Beltable is available for the process industries. It consists of a flat belt conveyor with a table top on adjustable legs. Ac-



Circle 285 on Reader Service Card

cording to the manufacturer, it can be adapted to practically any conveyor installation. The table top is adjustable transversely so that work can be performed on either or both sides. The unit is available in lengths up to 75 feet, with variable speeds from 5 to 120 feet a minute in a ratio of 3 to 1, or in several ranges of constant speed.

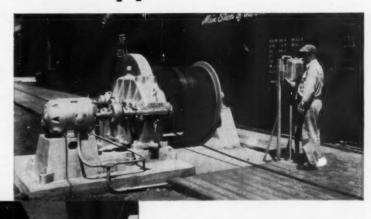
Standard Conveyor Co.

New Conveyor Pulley

According to the manufacturer, the Hydro Crown conveyor pulley gives the same result as a lathe crown yet costs less than a lagged crown pulley. It is said that this results from a unique method used to crown the pulley hydraulically. The Hydro

3 Ways to Unload Hopper Cars Faster

1. SPOT THEM ACCURATELY WITH JONES CAR PULLERS. Simple push-button control moves one or several cars safely in either direction, stops them in exact location desired.



2. THAW THEM OUT WITH PERFECTION GAS-FIRED INFRA-RED EQUIPMENT. Sold exclusively by Hewitt-Robins, Perfection car thawing equipment eliminates the dangers of torching and steaming, the high maintenance cost of pits, and the high operating costs of electric heating. Gas-fired infrared is direct, safe, and economical.

3. SPEED UNLOADING WITH H-R CAR SHAKEOUTS. Lower shakeout onto the hopper car with its companion Robbins & Meyers hoist (another Hewitt-Robins exclusive) and press the button. Within minutes, the car is emptied broomclean, safely, without hand labor.

Only Hewitt-Robins provides this complete hopper car unloading package—car pullers, thawing equipment, shakeouts, hoists. From preliminary investigation, through engineering and specifi-

cations, to final installation . . . ask Hewitt-Robins to handle the entire job for you! Write Hewitt-Robins, Stamford, Connecticut, for Bulletin 1-12.

HEWITT-ROBINS CAR SHAKEOUT



CONVEYOR BELTING AND IDLERS...POWER TRANSMISSION DRIVES INDUSTRIAL HOSE...VIBRATING CONVEYORS, SCREENS & SHAKEOUTS

H-R Product Manufacturing Plants in Buffalo, N. Y. . . . Chicago, III. . . . King of Prussia, Pa. . . . Passaic, N. J. . . . Amsterdam, Holland . . . Johannesburg, South Africa . . . London, England . . . Montreal, Canada . . . Paris, France

Circle 53 on Reader Service Card

Need Automation?



BUSCHMAN CONVEYORS



Whatever your handling problem Buschman makes low-cost production a reality. Buschman experience-engineered conveyors give you low initial and operating costs with proved dependability. Here are some typical examples.



- 1 Nearly ten million pieces each month are handled and shipped by a leading bearing producer's computercontrolled warehouse equipped with Buschman Wheel & Roller Conveyors.
- 2 Up-enders, down-enders and special units for increased handling efficiency are easily integrated into standardized conveyor systems for major appliance makers.
- 3 Overhead trolley cable conveyors carry light to medium weight loads thru all operations at convenient heights in this modern manufacturing plant.





What is your problem? Remember, Buschman offers the most complete range of conveyors to save time and cut costs.

Every Way Better

THE E. W. BUSCHMAN CO.

4450 Clifton Avenue, Cincinnati 32, Ohio

CONVEYORS FOR EVERY INDUSTRY

Circle 13 on Reader Service Card

CONVEYORS

(continued)

Crown pulley is available in dimensions from 3 to 6 inches and in a wide



Circle 286 on Reader Service Card

variety of face widths. It can be furnished with positive or center crowns, as well as negative or double crowns.

The Chantland Co.

Make Your Own V-Belts

Using a display with rolls of v-belting, Alligator v-belt fasteners, and application tools, an industrial user can



Circle 287 on Reader Service Card

make his own v-belts in any size. By using open end v-belting and Alligator fasteners the user can speed up replacement and keep his machines running. Also, says the manufacturer, the machines do not have to be dismantled; the user merely threads the v-belting around the pulleys and connects the fastener.

Flexible Steel Lacing Co.

For Light, Medium, Heavy Loads

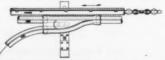
Wendway conveyor systems are available to handle a range of loads from delicate to extremely rugged. Construction varies with each. Light product type is linked-rod belt construction. Heavy duty is slat-type construction. A third type of construction offered is the canvas, Neoprene, or rubber belt equipped conveyor.

Union Steel Products Co., Industrial Conveyor Div.

Circle 288 on Reader Service Card

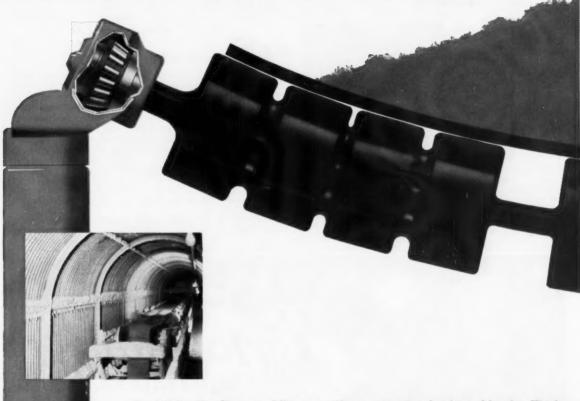
Track Switch

This compact track switch for power and free combination conveyor



Circle 289 on Reader Service Card

SELF-CLEANING JOY LIMBEROLLER® CONVEYOR IDLERS ELIMINATE MATERIAL BUILDUP



Joy Limberoller Conveyor Idlers are selfcleaning, because they flex constantly as they turn with the belt. Neoprene discs are moulded to wire rope, the ends of which turn in two bearings resting in the support brackets. This jam-proof design gives a freely rotating, flexible idler which will not allow even the stickiest materials to build up.

Service life ten times normal has been realized with the Limberoller, because the bearings are beyond the reach of spillageeliminating clogging and freezing. This bearing placement also makes it possible to service or replace Limberollers while the belt is moving.

Limberollers are economical, both because of the long service life and because they can be spaced further apart than steel idlers. They are flame and corrosion resistant, and eliminate the "bump" typical of steel idlers.

For complete details on Joy Limberoller Conveyor Idlers, write for Bulletin 353-90.



EQUIPMENT FOR ALL INDUSTRY









Joy Manufacturing Company Oliver Building, Pittsburgh 22, Pa. In Canada: Joy Manufacturing Company

In Canada: Joy Manufacturing Company (Canada) Limited, Galt, Ontario (continued)

systems furnishes adaptability to production needs. The switch is electronically controlled through limit switches and solenoids. Or it may be operated manually through pull-chain attachments. Self-indexed carriers can route themselves automatically in and out of pre-selected processing or free storage lines, to and from stations, areas, and departments, or will recycle if required.

Chainveyor Corp.

Conveys through Assembly

The Table-Cable conveyor will handle a variety of products through assembly at work-table heights. Four-wheel carriers run on angle tracks, carrying light to medium weight loads on pallets or fixtures. The Table-



Cable is the manufacturer's cable conveyor run upsidedown, using the same components. The conveyor is composed of free-running 4-wheel trolleys bolted to Bush-Lock cable with standard blocks for low-friction operation on the angle tracks. The pallets or fixtures are then secured to the trolleys as required. Various turns are available in the selection of components. By the use of inclines and holddown angles with the Bush-Lock cable design, loads can be carried to various table elevations.

E. W. Buschman Co.

Circle 290 on Reader Service Card

Pulley Covering Has Quick Adhesive

Roll and pulley covering is available in 96 foot rolls under the "Scotch-Lag" trademark. Made in 2 and 4 inch widths, the material has an adhesive backing which sticks at a touch. The pressure-sensitive adhesive is pro-



tected by a liner until ready for use. Most installations can be made on the job without removing the pulley or roll. Face of the material is composed of resilient particles which offer non-abrasive traction without damaging the belt. According to the manufacturer, it increases the life of rolls and pulleys and cuts maintenance costs.

Minnesota Mining and Manufacturing Co. Circle 291 on Reader Service Card

Corrosion Resisting Belt

According to the manufacturer, this line of conveyor belts has high tensile strengths per inch of width and can withstand corrosion, abrasion, and shock. The belts are based on a pitch line weave of nylon yarns, interwoven with other abrasion-resistant yarns. These form a hollow structure into which new plastics are poured. It is said that these plastics do not burn, do not promote static, resist acids, alkalis, and abrasion, and can be flexed without damage.

Russell Manufacturing Co.

Circle 292 on Reader Service Card

Automatic Pallet Loader

The Series 300 pallet loader features high capacity arragement and placement of packages on a pallet in a pre-





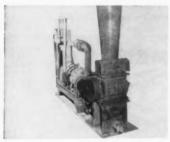
Circle 293 on Reader Service Card

determined pattern and quantity. According to the manufacturer, the loader's simplified construction results in lower maintenance costs. Tests indicate that the machine will handle a conventional seven-case pattern at the rate of 39 cases a minute. With larger loads utilizing more cases per layer, an operating speed of 44 cases a minute has been reached.

Alvey Conveyor Manufacturing Co.

Pressure Conveyor Hikes Output

A 40 hp package unit pressure conveyor has these capacities: 10 to 15 tons an hour for soft feed ingredients and 15 to 20 tons an hour for bulk



Circle 294 on Reader Service Card

whole grains and other free-flowing materials. The company says this is a 100 percent increase over previous models. The unit includes an inlet nozzle, flexible hose, long cone collector, rotary feeder valve with motor and drive, two rotary blowers, a 40 hp motor, kinetic transition with velocity trap, compact blow-through flat manifold, and an in-line filter.

Sprout, Waldron & Co. Inc.

Flat Bags Store Better

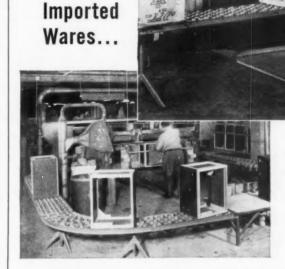
You can flatten bags as they come from the filling machine to insure firm,



Circle 295 on Reader Service Card



Raw Meat...



Appliance Cabinets... or what have you...

Move it fast, safe, sure with OLSON WHEEL CONVEYORS

For any production, warehousing, assembly or loading operation, there's an Olson Wheel Conveyor just right for the job.

- All steel or lightweight aluminum models
- Straight sections
- 45 and 90-degree curved sections
- Spur curves
- Flop-over section "Y" branch curves
- Widths of 12, 18 or 24 inches
- From 6 to 24 wheels per foot
- Temporary and permanent adjustable stands, portable stands, supports
- Reversible power turntable and other conveyor accessories

Specify

Ask for free Catalog 750C today

OLSON CONVEYORS

Manufactured by SAMUEL OLSON MFG. CO., INC. 2426 Bloomingdale Avenue • Chicago 47, Illinois

DIVISION OF CHERRY-BURRELL CORPORATION Circle 85 on Reader Service Card



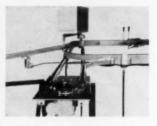
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safe stacking and reduce the amount of space needed to store them. Model BB 12Ex8' Type 32 bag flattener flattens each bag safely by squeezing it between a sandwich of two belt conveyors. The top belt adjusts for varying size bags.

New London Engineering Co.

Conveyor System Selects Route

A power and free overhead conveyor system can handle loads up to 600 lb for each work carrier. A Telematic Route Selector Dispatch Head can be furnished with each carrier. Two route selector dials on guide the carrier - after pre-setting - to any of the head automatically



80 stations. The system, called Power-Flex, can be used with storage banks, manufacturing work stations, segregation or integration of work carriers or inventory. Columbus McKinnon Chain Corp.

Circle 296 on Reader Service Card

Need a Magnetic Conveyor

Magnabelt is a line of magnetic conveyors for handling ferrous parts through steep inclines. This portable conveyor saves space by rolling into place where needed, as it magnetically moves nails, bolts, and other ferrous parts up inclines as high as 90 degrees. Containers can be placed under the gooseneck discharge from the front or either side without interfering with the conveyor support.

M-H Standard Corp.

Circle 297 on Reader Service Card

Belts Are Varied

A new series of belt conveyors, equipped with non-slip belting, are used for inter-floor movement of goods and as a booster in a gravity line. Belt widths range from 12 to 24 inches. The conveyor comes in 21/2-foot increments, but a 5-foot center conveyor



is basic. Either slider or roller bed may be selected. Components include chain drive for 50 fpm, safety release roller, straight or noseover delivery, box frame intermediate sections, gravity wheel or power feeder, adjustable floor stands, truss rail for long span, adjustable continuous guard rail, and connection for wheel or roller sections.

E. W. Buschman Co.

Circle 298 on Reader Service Card

Cleats for Belts

Rubber conveyor cleats may be installed with belt punch and screwdriver. "Bolta-Flite" cleats bolt to fabric, woven metal or chain belting of any width. They come in rubber or neoprene in heights up to four inches.

Holz Rubber Co.

Circle 299 on Reader Service Card

NOW YOU CAN LIFT and UMP **ANY** CONTAINER



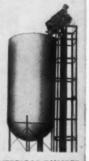
HYDRO-DUMPER



JUNIOR DUMPER Dumps up to 8 feet Load capacity, 700



SENIOR DUMPER Dumps up to 20 feet. Load capacity, 4000



VERTICAL DUMPER Dumps to any prac-tical height. Load ca-pacity, 4000 pounds.

Yes, no matter what size, shape or type container you use to receive, store or process free-flowing material - or whether it's a special in-plant container - ESSEX can supply the necessary dumper.

ESSEX dumpers are flexible in design so they can be modified to suit your job conditions. For the safe, reliable, economical way to lift and dump material in any container, call upon ESSEX for the answer.

SEND FOR NEW 8 PAGE INFORMATIVE CATALOG NO. 59

ESSEX CONVEYORS, INC.

Dept.MH, 165 Franklin Avenue, Nutley 10, New Jersey

Circle 43 on Reader Service Card



"VERTICAL TRANSPORTATION"

Here's conveyor automation betweenfloors - one, two, or three floor levels - with minimum remodelling. Automatic loading, unloading, lifting or lowering to match conveyor speed. Controls, brakes, switches, platforms all engineered to your needs.

Write for profitable suggestions on your own floor-to-floor conveyorizing with Weld-Bilt "Vertical Transportation" or Bulletin E-557.

WEST BEND EQUIPMENT CORP. MATERIALS HANDLING ENGINEERS

335 Water Street . West Bend, Wisconsin Circle 110 on Reader Service Card MATERIAL HANDLING ENGINEERING



1960 FORECAST

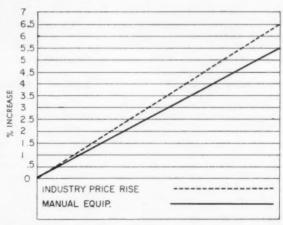
Manual Handling Equipment

EQUIPMENT MANUFACTURERS PREDICT

Steady gains in manual handling equipment. Manufacturer of pallet trucks and dollies sounds keynote. "Overall progress is achieved mostly by improvements of a minor nature that have accumulative effect." Says pallet use will increase in '60. Will mean more pallet handling equipment needed..... Other manufacturers say: automatic engaging and disengaging devices for towline trucks will be important in '60. Predict better automatic couplers and lower cost wheels. Predict more towline applications in food and chain store warehousing..... Other plans. More lightweight metal use. New developments in other light materials. Will use in food processing and hospitals. Report of product expansion by manufacturer. Will bring out line of tubular steel hand trucks in '60.

What Will Manual Handling Equipment Cost in 1960?

RESPONSES were roughly five to one in predicting a price increase in manual handling equipment in 1960. And all who predicted the increase in the survey said it would take place early in the year (most respondents mentioned the first quarter). Average predicted increase was 5.5 percent, one percent below the 6.5 average for the whole material handling industry. Like the rest of the material handling industry, manual handling equipment makers will depend on the steel settlement to guide their price increases.



Manual Equipment



Circle 164 on Reader Service Card



Circle 165 on Reader Service Card

Hydraulic Pallet Truck

The Multiton hydraulic pallet truck comes in capacities of 2,200, 3,500, and 4,400 lb. Features include: (1) A torsion bar which equalizes the load on the forks whether pallets are loaded evenly or not; (2) Easy to operate pallet entry and exit roller; (3) Fully sealed ball bearings, noteably in the front steering wheels. This eliminates previously existing lubrication points. Other improvements: (1) Oscillating front wheels for uneven floors; (2) Shoe type brakes operated by the handle; (3) Positive handle lock device which keeps the handle in an upright position when the truck is idle. Steering and handling of the machine has been greatly eased.

Stokvis Multiton Corp.

Lightweight Box Truck

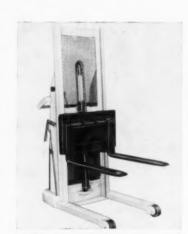
A chrome impregnated fibreglas box truck is designed for handling in textile industries, meat packing plants, food processing plants, warehouses, department stores, and mills. Lightweight and tough, it's impervious to steam, water, oil, mild acids, and mild alkalies. Withstands temperatures from -40° to 212° F, and for short exposures up to 250° F. Ball bearing, demountable rubber tired wheels are standard. Inside box measurements are: 18 x 36 x 24, or 24 x 47 x 24 inches. They weigh 50 and 68 lb respectively.

Nutting Truck and Caster Co.



Circle 166 on Reader Service Card

Circle 167 on Reader Service Card



Circle 168 on Reader Service Card

Portable Elevator

Available in lifting heights of 57, 77, and 87 inches is the HP model. Capacity of these four hand hydraulic units is 1,000 lb. Features include: a 26 by 26 inch platform, dual foot operated floor locks; rear swivel casters; dual lifting chains; 36½ inch wheelbase; 46½ inch turning radius; and 7½ degrees clearance. 31 other models are available in capacity from 1000 to 5,000 lb, and in lifting heights from 54 to 130 inches.

Crown Controls Co., Inc.

Sealed Sanitary Casters

A complete line of sealed sanitary casters has been developed by this company for the food handling and processing industries. Available are light, medium, and heavy duty models, 4 to 6 inch diameter wheels in either swivel or rigid models. All sanitary models come with high capacity, floor protective Texite wheels, built to run clean and stay clean longer. Periodic maintenance for grease loss or entry of debris is eliminated.

Albion Industries, Inc.

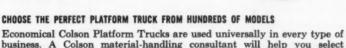
Telescopic Lift Truck

Model 5954 Big Joe battery powered hydraulically operated lift truck is a 1,500 lb capacity unit. It's specifically designed for in-between handling, where materials are to be moved under either regular or intermittent conditions. Has a 12 volt battery and self contained battery charger, and complete bearing control. Handles loads up to 57 inches, yet can be manipulated under low doorways and through narrow aisles.

Big Joe Mfg. Co.



Colson starts with the first essential . . . mobility, and begins building quality there with Colson Casters. Seventy-five years of experience go into putting together the *total* unit. Literally from the ground up Colson builds it better, supplying the complete product. From casters to completion, each part of this Colson Platform Truck is made with the careful precision that has made Colson famous for long-lasting quality. Quality costs less. Buy once, buy the best . . . Colson.



business. A Colson material-handling consultant will help you select the platform truck for your specific need. Choose from several different wheel arrangements; many body styles; steel or wooden decks; from hundreds of arrangements. Equipped with precision-engineered Colson Pressweld sealed bearing casters, running gear right for your floor condition and load. Send for a free full-line catalog of Casters, platform trucks, and components.



75 years of experience in supplying field-tested equipment and casters to industry and institutions. Millions of satisfied customers know and respect the name COLSON . . . synonym for quality.

THE COLSON CORPORATION 7 S. Dearborn Street

Plants in: Jonesboro, Ark.; Sommerville, Mass. and Elyria, Ohio

CHICAGO, ILLINOIS

Circle 33 on Reader Service Card

MANUAL EQUIPMENT

(continued)

Stem-Type Truck Casters

For light-medium duty use, these casters are designated the K400 Series. For maximum swiveling ease, they have two full rows of hardened



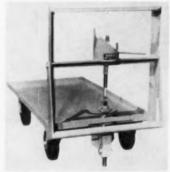
Circle 169 on Reader Service Card

ball bearings in separate lubricated hardened raceways. Wheels are made in three diameters: 31/2, 4, and 5 inches. There's a choice of 5 different treads for any floor surface. Load capacities range from 175 to 280 lb per caster. The 21/2 inch-long stem is available in round and octagonal shapes for any standard tubular metal truck frame.

Faultless Caster Corp.

Dragline Truck With Safety Release

The Model TT-18 conveyor truck with an automatic safety bumper release is available in capacities from 1,500 to 3,000 lb. And in all standard platform sizes. The automatic bumper release is a safety feature required



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in many plants that have long in-floor conveyor lines. Any time an object is struck by the full width bumper on

the truck, the conveyor pin is released, thereby preventing personnel injuries and damage to merchandise or equipment.

Jakes Foundry Co.

Steel-Bound Freight Cart

A four-wheel Floor Master Model E freight cart has a removable and replaceable hardwood deck in two



Circle 171 on Reader Service Card

sizes: 32 x 40 and 32 x 48 inches. The deck is completely steel-bound. Made of % inch hardwood, it replaces by removing six screws. The cart comes in capacities to 2,000 lb, with 6- or 8inch wheels of rubber or plastic. All have a blackboard, tubular bill holder and full-width push bar. Sealed roller bearings come with all 4 wheels. Lewis-Shepard Products, Inc.

THE SENSATIONAL

M-W COPPER-TONE

lightweight HAND TRUCK

- 30% lighter frame than steel
- 25% stronger than steel, magnesium or aluminum
- · 25% cheaper than aluminum
- · 40% cheaper than magnesium

Copper-Tone Trucks have a lifetime copper finish - the best-looking trucks in the land.

Considering their lightness of weight and tremendous strength - Copper-Tone Trucks are the least expensive fine hand trucks on the market.

Utility Hand Trucks A complete line. Copper-Tone or steel models available with single or double handles; open or closed plate; air, zero pressure or solid rubber tires; tubular stair climbers and many other features. Capacities up to 1500 lbs.



WRITE FOR OUR NEW COPPER-TONE BULLETIN

INCORPORATED 204 Jefferson St. . Washington, Mo.

MOELLENBROCK & WILKE INCORPORATED Circle 73 on Reader Service Card

There Were More New Products in 1959

... than we could publish in this issue. Our survey of the material handling industry turned up more items than we could fit into available space. However, we will try to complete our new products review next month in the February issue. The growth and expansion of the material handling industry is so tremendous that each year brings us an overflow of new developments and improvements in equipment.

MATERIAL HANDLING ENGINEERING's editors are most grateful to the people and companies who contributed the information about their products that made this issue possible. We know that our readers will benefit from reading about new equipment designed to make handling operations more efficient. We look forward to seeing the material handling developments in 1960 that have been predicted in our equipment forecasts. Because you, the readers, have shown a need for these developments, we are confident that the material handling equipment manufacturers will make them available to you this coming year.

All-Steel Utility Truck

A light weight, all-steel welded construction utility truck has been specifically engineered by this company for easy-to-handle maneuverability. Called Mitey Handy, it incorporates a load easing stair climber onto an exceptionally light weight,



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sturdy one-piece frame. This permits holding or moving the utility truck with one hand, leaving the other hand free for opening doors, pushing elevator buttons, pulling door cords. Curved cross-bars facilitate easy handling of round as well as square objects. Its design-engineered upright position allows bringing the truck's nose plate extra close to the load. The solid nose plate is welded to the back of the legs for extra strength. Truck is furnished with semi-pneumatic wheels, available in 6, 8, and 10 inch. All models have a 46 inch handle length, 14 inch frame width, 8 inch nose plate.

The Fairbanks Company

Wheelbarrow Powered

A powered wheelbarrow features a combination transmission, differential, and drive axle assembly in one housing, lubricated from one oil res-



Circle 173 on Reader Service Card

ervoir. The transmission is full torque shifting. The wheelbarrow has three-quarter ton capacity in a 10 cubic foot bucket. A flatbed platform can replace the bucket. The barrow is powered by a 7 hp air-cooled engine. The fully loaded unit takes a 20 percent incline.

The Prime-Mover Co.

Built for rugged service...

2 NEW

lightweight floor trucks

Here are 2 new trucks that feature corrosion-free properties plus strength without weight . . . up to 40% lighter than steel. This permits use in almost any industry plus larger loads and more trips with less energy, less manpower.



These light, but extra rugged trucks are designed to increase your handling efficiency and to save you money — based on lighter weight, longer life, reduced maintenance and less downtime. For full information send the coupon today.

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CASTER HOOR TRUCK	COMPANY NAME	_
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Reduce Handling Costs with



PALLET ROLLERS

Bottlenecks are eliminated, forklifts more efficiently utilized when loaded pallets are quickly, effortlessly rolled into place. Rugged but precision-engineered, Ace Pallet Rollers are available in five special-purpose designs, each with a wide variety of sizes and weight-capacities to fit your needs exactly.

Ace "Turn-a-bout" moves in any direction. Five frame sizes. 1800 lb. capacity. Ask for Engineering Bulletin 107. ACE ENGINEERING CO.
3901 GRAND AVE., OAKLAND, CALIF,

HOW TO GAIN EXTRA STORAGE SPACE FOR LIGHT, BULKY LOADS

USE

Pallet Rack

Battery Electric Lift Truck





This manufacturer uses a Walkie-Warkliffer to stack palletized shipping cartons and parts-in-process on upper floor. Straddle type truck is light weight for use on floors of limited capacity. Price \$2000.

No other truck saves time like a Walkie -Worklifter

ECONOMY Walkie-Worklifter 4524 W. Lake St., Chicago 24, III., ES 8-9110

Circle 130 on Reader Service Card

RE BO



PLATFORM BODY for 2-Wheel Hand Trucks

• Increases Load Carrying Capacity

• Reduces Rehandling

• Fits All 2-Wheel Hand Trucks

Nests When Empty

Smooth loading surface prevents damage to load. Tapered front toe board holds load against platform back for safe, easy handling. Capacity 1,000 pounds. The most economical complete material handling system yet devised.

RE-BO MANUFACTURING COMPANY West Market Street at Central Avenue Newark 7, New Jersey

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MANUAL EQUIPMENT

(continued)

One Man Scoop Truck

The Climax scoop truck #674-0 is ideal for handling bulky merchandise in factories and storage plants. It has



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two 5 x 1½ inch wheels centered under it for easy moving. Capacity is about 3 bushel. Available with Moldon rubber, solid rubber, or steel wheels. Truck also facilitates handling of grain, sand, fruits, and vegetables.

Lansing Co.

Truck Coder

The Cargo Coder is a mechanical device for showing numbers on a towline truck. The photograph shows the



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difference in legibility between the Coder on the right and a blackboard on the left. The numbers on the Cargo Coder can be changed quickly and easily, even by a worker wearing gloves.

Reliance Equipment Inc.

A Wrench for Any Drum

The Morse drum plug wrench will fit almost any popular drums on the market. Seven projections and five slots conform to almost any bung made. It's light, well balanced, easy to use. A 16' handle fives enough leverage to



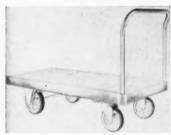
Circle 176 on Reader Service Card

open even the toughest bungs. Model 61 is made of special steel alloy, for drums holding non-volatile fluids. Model 61M is non-sparking bronze for hazardous areas.

Morse Mfg. Co., Inc.

Trucks Made of Aluminum

A series of lightweight, all-aluminum floor trucks has been designed where easy rolling and corrosion-free



Circle 177 on Reader Service Card

properties are required. They are made of heat treated structural aluminum alloy, non-sparking, non-toxic, and resistant to attack by foods. The safety tread deck is enclosed by a double angle frame. Welded construction provides a one-piece unit, thoroughly braced. These trucks have three-bearing casters with demountable rubber tired wheels. The trucks come in six standard deck sizes.

Nutting Truck and Caster Co.



You and Charlie still plan on doing that William Tell bit for the AMHS Meeting.

FEATURE FOR FEATURE

America's Finest

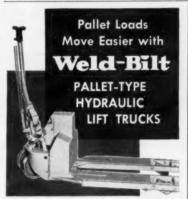
PLATFORM TRUCK

LANSING COMPANY

REYNOLDS

The rugged reliability of Reynolds Platform Trucks is the standard of the industry. Rigid quality control assures long life with low maintenance cost. Capacities and sizes up to 3,000 lbs. Special superstructures are available. Ask your distributor or mill supply salesman for America's finest—Lansing Reynolds Platform Trucks.





Easy-entry booster rollers, Multi-Stroke fast-lift operation, accelerator-type lowering pedal, Anti-kickback Safety Handle, front wheel equalizer — these and other Weld-Bilt features promise long laborsaving service on your single or double pallet-moving operations. Check all the advantages — write for bulletin No. LT854.

For information on our complete line write us or our nearby representative.

Weld Bilt

Hydraulic Lift Tables and Trucks — Portable Elevators — Automatic Conveyor-lift Elevators — Conveyors — Skids — Special Equipment.

WEST BEND EQUIPMENT CORP. MATERIALS HANDLING ENGINEERS

335 Water Street, West Bend, Wisconsin Circle 111 on Reader Service Card

HOW TO SAVE SPACE WHEN STORING PARTS-IN-PROCESS

WRITE FOR

ILLUSTRATED

LITERATURE AND

SPECIFICATIONS

USE

Wire Pallet Boxes
Pallet Racks
Battery Electric Lift Truck



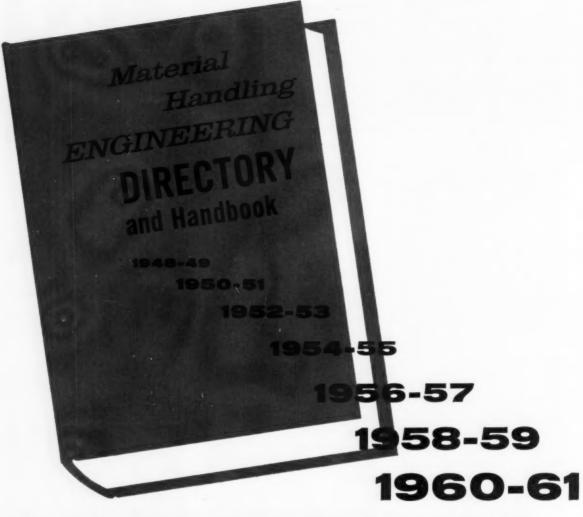


Collapsible wire stacking boxes are placed in three-tier adjustable rack. A Walkie - Warklifter delivers and stacks the 2000 lb. loads with 'room to spare' in a six foot oisle. Price \$2880. No other truck saves space like a Worklifter.

ECONOMY Walkie-Worklifter 4524 West Lake Street, EStebrook 8-9110 Chicago 24, Illinois

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A Handling Tradition . . .



14 YEARS' DEVELOPMENT...

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Send me the 1960/61 MHE Directory as soon as it's published.
Send me () copies at \$10.00 apiece.
Send me () copies at \$10.00 apiece. I am enclosing a check in payment.
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City State

A giant reference file of material handling information at your fingertips! You'll find every type of handling equipment listed . . . the manufacturers who make it . . . where they're located . . . where to find their distributors. And it's combined with a first-time-out Handbook . . . the most complete source of technical data for the material handling engineer. Contains condensed, explicit engineering information.



1960 FORECAST

Yard Handling Equipment

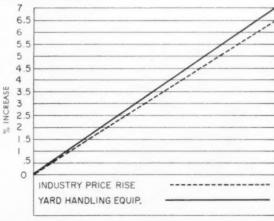
EQUIPMENT MANUFACTURERS PREDICT

Better yard equipment. Improvements scheduled for cranes, tractors in '60. Purpose: more power, greater versatility. Examples. Crane manufacturer will bring out double ball bearing ring. To be standard on crane line. Eliminates center post.

.... Tractor improvements. A manufacturer will introduce complete new line of tractor-based products. Will also bring out new components for present lines..... Other tractor news. Manufacturer will feature torque converter and hydraulic reversing transmission on tractor shovel. Will increase lifting capacity..... Indoor-outdoor handling. Crane car will have developments in "prime mover" transmission. One manufacturer says new heavy duty applications will need rugged vehicles. With fast-accelerating hydrostatic or electric transmissions.

What Will Yard Handling Equipment Cost in 1960?

A MAJORITY of yard handling equipment manufacturers indicated a price increase in 1960. Average increase in the survey was 7 percent, which is half a percent higher than the 6.5 average of the whole material handling equipment industry. Price rises are scheduled for the first quarter in 1960. A typical manufacturer outlook, "Much, of course, depends on basic materials that go into our products, on government actions affecting taxes and operations, and on stopping inflationary pressures."



Yard Handling



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Medium-Capacity Straddle Carrier

A medium-capacity straddle truck carrier has been introduced by this company, offering increased maneuverability and performance for handling of loads up to 20,000 lb. The Hyster M200E straddle carrier is a companion machine to the 30,000 lb. Hyster M300E. The 20,000 lb straddle truck carrier shares many components with the heavier model. Included are the 164-HP V-8 power plant, drive train, and hoist system. Shorter turning radius and higher top speed are big features of the M200E. Its road speed, up to 52 miles per hour, permits fast, profitable handling of material. LP-Gas and diesel power are available.

Hyster Co.

Long Reach Tractor Shovel

Tractor shovel H-120 features high dumping clearance, long reach, and a powerful engine that develops 300 hp. The carry capacity rates conservatively at 12,000 lb with buckets from 3 to 6 cu yd. For digging, the tractor has a breakout force of 26,000 lb. The bucket raises to more than 19 ft. With bucket dumped at 50 degrees, clearance under bucket edge is 10 ft 10 inches, and forward reach from front tire is 3 ft 6 inches. Special emphasis is on safety and stability. Maximum travel speed is 28 mph. A canopy cab comes as standard equipment. The bucket-type operator's seat is positioned to provide complete visibility of the bucket and load during all digging stages. This newest Payloader is powered by a turbo-charged Cummins NRT-6-BI diesel engine that develops the 300 hp at 2,100 rpm. Optional engines will be available soon. Standard unit is equipped with 26.5 x 25, 14 ply tires. Both air brakes and power steering are standard. Dual pedals give the operator a choice of braking with transmission engaged or disengaged. For easy servicing, there are two special access panels in addition to the regular service panels, one on either side of the machine. They expose all electrical and hydraulic components.

The Frank G. Hough Co.



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Circle 180 on Reader Service Card

20,000-Lb. Capacity Mobile Crane

This hydraulically-operated mobile crane can lift to 20,000-lb capacity. Called model 410, it features a telescoping, rotating boom, operated hydraulically. Also hydraulically operated are the hook travel, topping, power steering, and outriggers. The crane permits inching of loads to precise positions. The operator has positive control over all movements. The boom has a basic 15-ft horizontal reach and 10-ft extension. Optional manual extensions give a maximum reach of 47 ft. The boom tilts to 60° from the horizontal and rotates through continuous circles in either direction. Four-wheel power steering, two-wheel drive, and a torque converter are standard equipment. The crane comes with a gasoline or diesel engine with road speed up to 23 mph. The tires are 14.00×24 . Accessories include heated cab enclosures, a double-acting clamshell bucket, a 24-inch post hole auger, and remote control maintenance platform.

Austin-Western Co.



One rubber-tired dozer works two stockpiles, replaces 2 crawlers for City of Cleveland

Michigan dozes, compacts, travels expressway between jobs

Two coal stockpiles a mile and a half apart with an 8 lane expressway in between had always meant two crawlers and two operators for the City of Cleveland Municipal Light Plant. An expensive proposition, to be sure! Then, George Paraskeva, plant supt, hit on the idea of using one Michigan Tractor Dozer—on rubber.

He talked with the Michigan Distributor in Cleveland, who agreed that a 162 hp Model 180 could handle both stockpiling chores. They figured that with 27 mph mobility, self-powered travel time between work areas would require less than 10 minutes.

First advantage-Speed

The Michigan was tried, and it stayed on the job. Mr. Paraskeva says, "Com-

pared to the crawlers, the rubber-tired Michigan is doing a better job due to its higher working speeds. It builds up and carries a big load ahead of its 10-ft blade. We timed the Michigan on a typical 200-foot-long, 15% grade and it dozed 3 tons per bladeful per minute.

"We produce 1½ million kwh of power daily and the Model 180 easily feeds the required 900 tons of coal, per 8-hour day."

Second advantage— Compaction

The 15-ton weight of the Model 180, riding on four tires, produces greater compaction on the coal stockpiles than when crawlers were used. "This is important," says Superintendent Paraskeva, "because with reduced air space within the pile the chances of spontaneous combustion are greatly minimized."

Third advantage—Mobility

The two stockpiles which supply the power plant contain 40,000 and 12,000 tons respectively. The Model 180 works each pile as needed. It travels the crowded expressway at 27 mph speeds, taking only 5 to 10 minutes between work areas. A crawler working both areas would have to be loaded on a trailer, transported, unloaded—might take a couple hours not to mention the investment for truck and trailer.

Does entire job

The Michigan is continually working the two stockpiles—compacting, reshaping and dozing up to 900 tons of coal per day into the underground conveyor leading to the generating plant.

Most likely, a Michigan Tractor Dozer would help speed things up on your job, too. There are four sizes to choose from—162 to 600 hp. Call us for a no-obligation demonstration.

Michigan is a registered trademark of

CLARK EQUIPMENT COMPANY Construction Machinery Division

CLARK® EQUIPMENT

2445 Pipestone Road Benton Harbor 4, Michigan

Canadian Clark, Ltd.

St. Thomas, Onlar

Circle 29 on Reader Service Card

low-cost fork lifts with quick-change attachments



KWIK-MIX S-10 — At exceptionally low-cost you can mechanize your material-handling with one basic unit and easily-changed attachments. For example: As a fork lift, S-10 Moto-Bug lifts 1000 pounds (at 15-inch load center) — has a 7½-ft. lifting height. Weighs only 1625 lbs. Forks are 20 or 30 inches long, adjustable 6 to 32 inches wide for handling boxes, crates. Hydraulic power raises, lowers load. As a 10 or 15-cu. ft. power wheelbarrow or 34-inch x 4-foot flatbed truck, S-10 Moto-Bug hauls 1500 lbs. and climbs 16% ramps fully loaded.

B1G R=18 — with 7½-ft. fork lift, handles 1500 pounds at 15-inch load center. Mast tilts 2° forward, 10° back for load pick-up and release. As an 18-cubic foot power wheelbarrow, or 42 x 54-inch flatbed truck, R-18 Moto-Bug hauls 3000 lbs., climbs 25% ramps fully loaded. Travels 12 mph forward and reverse — no clutching or shifting.

Has 780 lbs. drawbar pull; 5-ft. utility blade. Exhaust fume-control unit, or L.P. gas equipment is optional on both models. See your Kwik-Mix distributor or write.



mail to: KWIK-MIX CO., Port Washington	, Wis. Send facts on: 🗌 R-18 🗎 S-10 Moto-Bug
NA M E	TITLE
COMPANY	DIV



ADDRESS.

Also send literature on new 221/2-foo (4000 to 6000 (b.) Hi-Lifter fork truck

KM908 MHE



Division of Koehring

YARD HANDLING

(continued)

Four-Wheel Drive Tractor Shovel

Model 55-A Michigan tractor shovel is the company's new 26 mph, one cu yd capacity unit. It has four-wheel drive, and all other big machine fea-



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tures carried as standard equipment on the five larger Michigans of this type, including the Michigan power train. Equipped with a 66.5 horsepower gasoline engine, it has a working weight of 10,500 lb. It will lift and carry up to 7,000 lb, providing a wide safety margin over the weight of most materials handled in one cu yd amounts. This feature, according to the company, assures a longer machine life, because the tractor shovel is not constantly working at or near full capacity.

Clark Equipment Co.

Construction Machinery Division

Safe Connection

A boom pendant fitting for wire rope has been developed of steel,



Circle 182 on Reader Service Card

drop forged in one piece. There are no weldments or castings. Field tests showed that the wire rope broke every time without damage to the fitting. It is interchangeable with standard wire rope sockets.

Sherman & Reilly Inc.

Crawler Tractors With Single-Stick Control

A master control that turns the job of driving crawler tractors into the simple matter of pushing a single control stick has been developed by John Deere engineers. The control activates hydraulics to perform various steps of clutching, braking, steering, and shifting for forward and reverse travel. Called "Pilot-Touch" the control will be offered as optional equipment on the company's Model 440 industrial crawlers. Only slight pressure is re-



it will save you money!

to see how,

write today for this folder..



Ask for Bulletin T-131; Whiting Corporation, 15624 Lathrop Avenue, Harvey, Illinois

27 OF AMERICA'S TOP 100 CORPORATIONS ARE WHITING CUSTOMER



WHITING

MANUFACTURERS OF CRANES; TRAMBEAM HANDLING SYSTEMS; TRACKMOBILES; FOUNDRY, RAILROAD, AND SWENSON CHEMICAL EQUIPMENT.

Circle 108 on Reader Service Card

JANUARY, 1960

65

YARD HANDLING

(continued)

quired on the control stick. Since the crawler can be operated with one hand, the other hand is free for full-



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time control of loaders, bulldozers, or other working equipment being used with the crawler. In addition to reducing operator fatigue, the simplified operation and ease of control speeds up working cycles and increases working capacity.

John Deere Industrial Division

Tractor Shovel With Special Features

The HD-6G 11/2-cu vd tractor shovel is powered by an AC 4-cycle diesel engine rated at 72 net horsepower. Dumping height of the unit is over



Circle 184 on Reader Service Card

9 ft. It has ample reach to get bucket loads out to the center of high-sided trucks. Shovel functions can be precisely controlled with the hydraulic system that incorporates a specially designed heavy-duty gear-pump. The pump is mounted directly to the front end of the engine crankshaft. Forward down-sloping hood design permits the operator to watch all bucket operations. Tractor's slim fuel tank and stub fender design gives good work area visibility. Wide variety of attachments are available.

Allis-Chalmers

Fast Discharge Concrete Hopper Attachment

A concrete hopper is now available as an attachment for this company's Hi-Lifter fork truck. The hopper is available in 1/2 and 3/4 yard sizes. The



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attachment is a fork-entry unit that slips on easily over the forks for fast, effortless attaching and detaching from the Hi-Lifter. It's a heavy-duty, all-steel welded unit, featuring fast discharge. Door is operated by a lever so that it can be closed for partial discharge. The 3/4 yd hopper is 48 x 60 x 56 inches high. It weighs 580 lb. A hydraulically controled discharge door is optional equipment.

Kwik-Mix Co. Div. of Koehring Co.

Maneuverable Material Carrier

Compact Model 12-RH Material Carrier, manufactured by the Gerlinger Carrier Co., has 88-inch wheel-



Circle 186 on Reader Service Card

base and 146 inch over-all length. This enables it to operate efficiently in restricted areas. Carrier has 117 inch-long rigid-type lifting shoes. It provides 16 inch lift and 6-ton loadcarrying capacity. Unit can pick up, transport, and deposit lumber and other loads measuring up to 4½ ft high and 42 inches wide. Driver has unobstructed view for added speed and safety.

Towmotor Corp.

80-Ton Rubber Tire Crane

Model MC-875 is the company's latest addition to its rubber tire crane line. Features include shear ball turntable mountings, two-lever Joy Stick air controls, square-tubular-chord boom, and a one piece cast steel car-



Circle 187 on Reader Service Card

rier frame. The machine handles up to 200 ft of boom plus 40 ft tip extension. The machine is equipped for precision throttle control of loads. This is made possible by the torque converter that assures ample power that adjusts automatically to meet the exact operating and load requirement at any moment.

The Thew Shovel Co.

4-Wheel Drive Lift Truck

Company's 44 Hi-Lo is specifically engineered to meet the exacting requirements of the building contractor. It can handle heavy loads easily in unusually rough construction site terrain in all weather conditions. It's



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able to serve scaffolding combinations up to 23 feet. Lifting capacity is 4,-000 lb at 24 inch load centers at speeds of 52 ft per minute. Capacity of 5,000 lb is also available. The 44 Hi-Lo with 4-wheel drive has a 109 hp Chrysler Industrial 6-cylinder engine. Standard equipment includes: 4-wheel power brakes, and fulltime power steering axles are full-floating.

The Champ Corp. power steering axle. Front and rear

Log Stacker Takes 17 Tons

A three-wheel "little brother" log stacker has been developed to handle 17 tons or less. The stacker is 32 feet long with a turning radius of 25 feet. It can hoist 16 feet above the ground. It is powered by a 195 hp diesel engine driving generators which power the two front wheels and motors for steering the rear wheel, lowering the tusks, tilting the mast, and elevating the five-foot forks.

R. G. LeTourneau Inc.

Circle 271 on Reader Service Card



All these PROTECTIVE features are a part of the H-25 PAYLOADER®

LOADER' tractor-shovels that we have lays, abuse, downtime and the like." produced for steel mills, foundries, chemical and fertilizer plants usually operate under exposure to dust, dirt, powder and foreign materials," says Ralph Beyerstedt, Executive Vice-President of The Frank G. Hough Co.

"During the development of the H-25, as soon as it became evident that we were going to obtain the increased capacity, production, operating ease, speed and mobility we sought, our engineers then gave major attention to protective features for operational in-

"The more than 10,000 small 'PAY- surance against wear, maintenance de-

Dozens of Protective Features

We started by giving the engine maximum protection with a triple air cleaning system, cartridge-type oil filter, sealed ignition and starter switches, a 12-volt electric system with sealed generator, solder coated terminals and a clutch-pressure warning device. The filtered hydraulic system is closed and pressure controlled and the majority of all major pivot points in the boom arm mechanism, the gearshift and steering linkage are sealed."

What About H-25 Production?

"Most important of all, the operating capacity of the H-25 is 2,500 lbs. -25% greater than has ever before been available in a tractor-shovel of its size and maneuverability. It is the only loader in its size range with complete powershift transmission - having 2 speed ranges forward and 2 in reverse. Power steering also is standard.

"Other plus features of the H-25 that mean more production, long life and less

Circle 54 on Reader Service Card

maintenance are the exclusive powertransfer differential, wet-sleeve overhead valve engine, 4,500 lbs. of bucket breakout force and 40° bucket tip back at ground level."

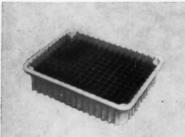
Your "PAYLOADER" Distributor wants to show you how the greater capacity, easier handling and more fully protected H-25 can cut your bulk handling costs.



HOUGH, PAYLOADER, PAYMOVER, PAYLOGGER and PAY are registered trademark names of The Frank G. Hough Co., Libertyville, Illinois

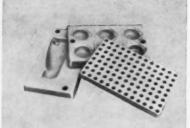
THE FRANK G. F 731 Sunnyside Ave., L Send H-25 "PAYLOA Name	ibertyville, III.
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Street	
City	State
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MODU BOX

Complete system available in sixteen sizes — with or without stacking lugs, covers, dividers, ticket holders and



INSERT TRAYS

Individual sizes to fit Modu Box system, or custom made to your specifications

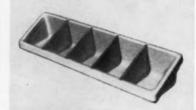


TOTE BOX

Covers available for many sizes

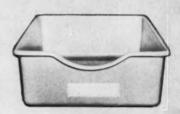


HEAVY DUTY TOTE BOX Nests and/or cross stacks



PARTS CUP

For assembly lines - parts available in 3 different sizes with or without racks



SCHOOL TRAY

Available in many sizes to fit most rack storage systems



MEAT LUG

For food and industrial uses. Nesting and cross stacking features available.



Hundreds of stock sizes available, or we will manufacture to your specifications.

If you have a material handling problem, our engineers will be pleased to assist you with boxes, covers, inserts, dividers, ticket holders, parts cups and custom parts to your specifications.



DURO MEAT BOX Stack and/or nests for food or industrial use

Write or Wire for FREE Literature:

HOLLYWOOD PLASTICS, INC.

4560 Worth Street Los Angeles 63, California Phone ANgelus 8-1181

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1960 FORECAST

In-Plant Containers

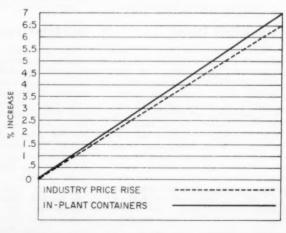
EQUIPMENT MANUFACTURERS PREDICT

Container and rack improvements. No radical design departures predicted for '60. But design improvements planned for many products. Why? To make installations cheaper and stronger. To improve appearance. Examples. Manufacturer will bring out special high-carbon steel pipe. Will be rolled from salvaged anvil steel. Supposed to have double strength. . . . Design improvements scheduled for wire containers. Aimed at air cargo use. . .

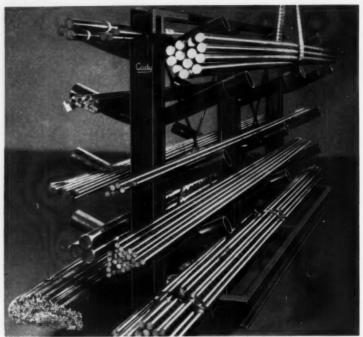
Look for new finishes and coatings on fibre boxes. Improved appearance. Will be used in electronics parts handling. Improved designs in food handling equipment. Aluminum cabinets and racks will be upgraded. Part of centralized food handling for schools, hospitals.

What Will In-Plant Containers Cost in 1960?

SINCE BOTH direct and indirect costs of steel racks and containers would be increased with a steel price boost, manufacturers of these items seemed to be anticipating a higher price of steel when asked about price increases in 1960. Survey opinion was topheavy in predicting a price rise. Average increase was 7 percent, half a percent higher than the overall material handling equipment industry increase of 6.5 percent. Most of the increases would come in the first quarter.



In-Plant Containers & Racks



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Sides Fold Down

You can store and ship in these corrugated folding-stacking boxes. They save space because all four sides fold down. This is done by a keyhole locking device and hinges. No tools are needed. The ends lock into position through keyhole slots on the base. Then the hinged front and back sides lock into slots on the corner posts. When folded, four boxes occupy about the same space as one loaded box. This can mean as much as 80 percent savings in transportation charges. Optional is a half-door folding out for parts removal without moving a stacked box.

Palmer-Shile Co.



Circle 191 on Reader Service Card

Box Interstacks

The all-purpose Toteline industrial tote box interstacks with metal containers of 10 x 20 x 8-inch size. They manufacture the tote box from rustresistant, molded fiber glass and poly-ester resins. Molded handles make part of the integral, one-piece stacking lip. Steel wire, concealed within the box edges, adds strength and rigidity. This tote box has a smooth, non-porous surface which resists corrosion. The box cleans easily with hot water or steam. It will not dent or bend out of shape. The box weighs just over 6 lb. Dimensions: 10% x 22 (at the top) x 8 inches. Gray is the standard color but others are available. Molded Fiber Glass Tray Co.

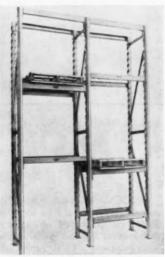
You Can Unload Rack Without Unstacking

A new line of racks for storing bars, tubing, and pipe permits loading and unloading at any level without unstacking upper tiers. The Bartender can work with overhead hoists. Telescoping extensions (second row from top) make possible added storage. Standardized components allow the racks to take stock up to 20 ft long, in 2½, 4, and 5-ton bundles with total capacity of 50 tons. The Bartender is painted safety yellow and comes knocked-down for easy shipping and quick assembly.

Cady Metal Fabricating Inc.

Takes Any Load

The Triple Wedge Boltless Rack is available for any load capacity, height, depth, or span. It holds pallets, skids, dies, drums, or hand storage. Shelf connections wedge vertically, front to back and side to side. The rack goes up by engaging support beams in con-

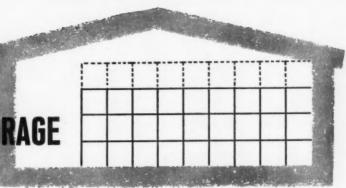


Circle 192 on Reader Service Card

nector holes in uprights and by driving into wedged position. Height is adjusted by driving out beam and relocating on 4-inch centers. No need for nuts, bolts, or other parts. And the whole thing is done by hand. Outsides of uprights are smooth, no holes or protrusions.

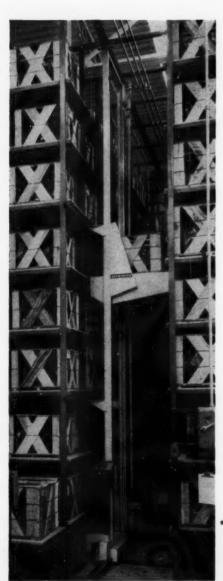
Hartman Metal Fabricators Inc.

MAXIMUM CAPACITY THRU RANDOM STORAGE

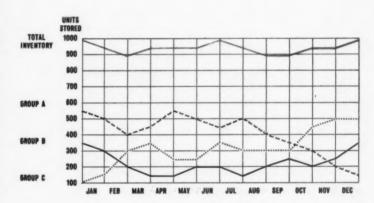


and

TRIAX RETRIEVER



Don't waste valuable space. The new Triax Retriever System now makes possible the complete utilization of all storage space . . . at all times . . . with full inventory selectivity. Because the Retriever can automatically place any unit load in any open compartment . . . or can remove any unit at the touch of a button . . . there is no waste storage space. No block of space must be reserved to accommodate the maximum inventory of a given item and no special provisions have to be made for temporary accommodation of an over-supply of any given item. Whenever any compartment in the entire installation has been emptied, it is immediately available for incoming material regardless of classification. The Retriever gives true random storage . . . complete accessibility to any unit . . . complete utilization of all warehouse space.



The simplified graph above indicates how, with a Triax Retriever System, random storage makes maximum utilization of warehouse space at all times. Regardless of the peaks or lows of inventory of any part or storage unit, all compartments may be used throughout the year.



COMPANY

SWeetbrier 1-9800

11955 SHAKER BLVD.

CLEVELAND 20, OHIO

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MIDDLE ATLANTIC

ACME PALLET CO., INC.

15 Park Row New York 38, N. Y. PHONE: BEekman 3-6645 You can put your confidence

in pallet manufacturers



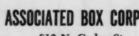
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ASSOCIATED BOX CORP.

812 N. Cedar St. New Castle, Pa. PHONE: OLiver 2-6681



R. C. BENNETT BOX CO.

2 North Dean St. Englewood, N. J. PHONE: LOwell 8-1956-7-8



CLINCH-TITE CORP.

20 East Athens Ave. Ardmore, Pa. PHONE: MIdway 9-0482-3



D. H. DAVIDSON MFG. CO.

2007-11 Washington Ave. Philadelphia 46, Pa. PHONE: Kingsley 5-1211



GOODWIN BROTHERS PALLET CO., INC.

Mine Run, Virginia PHONE: UNionville 2121



MAJOR PALLET & REPAIR CO., INC.

196 Division Ave. Garfield, N. J. PHONE: PRescott 9-2018

HOW TO SELECT

The wooden pallet has not been matched as yet in its versatility and economics by any other material handling device. They are used in every phase of modern industry from the raw material stage through the delivery of the finished product to the ultimate distributor. It has contributed more to the efficiency of handling and storing goods in the last 10 years than all of the centuries of palletless handling, which preceded it.

To obtain the most from your pallet dollars the best rule is to buy properly constructed wooden pallets. Wooden pallets may often look alike but still differ in quality as much as night and day. A properly constructed wooden pallet is an engineered product specifically designed to perform an exacting function. When so manufactured, no other product now available can equal the low per-use cost of a wooden pallet for handling or

storage purposes. Probably the least understood phase of the science of modern handling is the proper construction of wooden pallets. Biggest aids to pallet purchasing are the Minimum Standard Specifications for warehouse pallets published by the National Wooden Pallet Manufacturers Association (NWPMA). These spell out in detail the various minimum requirements for proper construction. In addition, every pallet order should contain 12 important technical details, as follows:

- (1) Size of pallet (length and width; always designate length first.)
- (2) Type of pallet desired. (3) Design of pallet desired.
- (4) Lumber species permitted. (5) Minimum dimensions of deckboards and stringers or blocks.
- (6) Moisture content or NWPMA pallet Grade.
- (7) Maximum and minimum individual and total spacing between top and bottom deckboards.
- (8) Number and position of stringers or blocks.
- (9) Chamfering, if desired.
- (10) Type, designation, and numbering of fastenings.
- (11) Pre-drilling, if required.
- (12) Wood preservatives, if required.

Wooden pallets are the only pallets on the market



MILLVILLE LUMBER PRODUCTS, INC.

PHONE: GLencourt 8-2161

NATIONAL PALLET CORP.

947 Oliver Building Pittsburgh 22, Pa. PHONE: EXpress 1-0770





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displaying this symbol

PALLETS INCORPORATED

68 Pearl St. Hudson Falls, N. Y. PHONE: 4-7258



WOODEN PALLETS

today which are readily repairable as well as durable. Although some pallet damage is unavoidable, many pallets are damaged because of carelessness on the part of personnel engaged in pallet handling. You can insure your pallet investment by first buying properly constructed pallets, and then seeing that they are used properly.

Users should be certain that their equipment is of proper design for use with the pallets which they have in their handling system. One of the most important factors along these lines is that fork arms should be as long as the depth of the pallet's fork entries, or not more than two inches shorter than such entries. This is required for safety, as well as to prevent damage to good pallets.

Based on the experience of thousands of users over the years, the National Wooden Pallet Manufacturers Association has compiled a set of rules to be followed in preventing and minimizing pallet damage:

- Drive handling equipment carefully into position and engage the load properly; equipment should be square with the load.
- Drive equipment forward until load touches carriage; do not bump or jar loads.
- Space forks of handling equipment as wide as possible to provide more equal distribution of weight, making certain that forks are spaced evenly from center stringer or blocks.
- When engaging pallet, keep forks level; do not drag forks on the floor, nor enter or withdraw with tilted forks.
- In entering or withdrawing from the pallet do not strike the stringer or blocks with the forks.
- Do not slue the pallet around with one fork in order to line it up for two fork entry.
- Do not remove the top pallet in a pile by sliding it off, and allowing it to fall to the ground, as this loosens the fastenings and causes damage to the deckboards.
- Do not improperly load or overload a pallet, as this can result in broken deckboards due to uneven distribution of load.
- When shipping on pallets, do not strap objects to them which have a bottom surface area

PALLET SALES CORP.

122 East 42nd St. New York 17, N. Y. PHONE: Oxford 7-2850



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NORTH CENTRAL

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4855 S. Racine Ave. Chicago 9, Ill. PHONE: CL 4-8550



DODD SAWMILLS, INC.

R. R. 4 Sullivan, Indiana PHONE: 202-A



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NWPMA

KENTUCKY MILLS LUMBER & MFG. CO., INC.

Box 327, Logan County Lewisburg, Ky. PHONE: SKyline 5-6121 & 5-6136



16232 James Couzens Hwy. Detroit 21, Mich. PHONE: DIamond 1-4141

J. R. PERKINS LUMBER CO.

122 North Seventh St. St. Louis 1, Mo. PHONE: CHestnut 1-0603

SPRING WOOD PRODUCTS, INC.

Austin Road Geneva, Ohio PHONE: HOward 6-2421

SOUTH CENTRAL

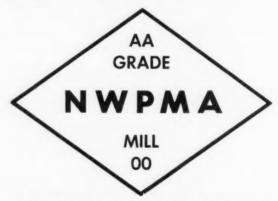
ARKANSAS PALLET CO.

P. O. Box 794 — 4th & Spruce Streets Pine Bluff, Arkansas PHONE: JE 4-5020

OZARK BOX & CRATING CO.

P. O. Box 321 Clarksville, Arkansas PHONE: PLeasant 4-3000 smaller than the deck of the pallet, thus pulling off top deckboards.

One way to make sure that you are receiving full value for your pallet dollars is to insist that your pallets bear the NWPMA Grade Mark.



This is the official NWPMA Grade Mark, which assures you that your pallets are quality-controlled to definite standards. It offers a common denominator for measurement of quality, and is backed by an impartial national trade association. Many firms have already adopted this Grade Mark as part of their company specifications for wooden pallets. It is your assurance that you are receiving full value.

Standard Test Methods Published

In 1959 the National Wooden Pallet Manufacturers Association published a set of Approved Tests for Evaluating Pallets, which it is believed will be valuable to users of this product. The purposes of these tests are: (1) to help the user to determine if a given pallet will do the job for which it is designed and is to be used; and (2) to establish procedures to determine the relative effectiveness of pallets of various materials.

Four (4) test methods for evaluating pallets for both warehouse and shipping conditions are covered by this publication, as follows:

Warehouse Conditions

(1) Leading or End Board Test: This test to simulate the action of fork-lift trucks in entering and lifting loaded pallets. A machine is to be designed by NWPMA to effect this test, in lieu of



OZARK FOREST PRODUCTS

1819 W. Sixth (P. O. Box 102) Fayetteville, Arkansas PHONE: HIllcrest 2-9866

PACIFIC AND MOUNTAIN

CARROLL BOX & PALLET CO.

4245 E. Sheila St. Los Angeles 23, Calif. PHONE: ANgelus 3-3815







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CASHWAY WHOLESALE & MFG. CO.

4306 Main St. Union Gap (Yakima), Washington PHONE: GLencourt 2-7191



actual use of fork-lift trucks.

(2) Compression Test: This test to determine the static load properties of pallets by means of the Baldwin-Southwark or Tinius-Olson testing machines, or by dead-weight loading.

Shipping Conditions

(3) Vibration Test: This test to determine the forces present in the shipment of palletized unit loads. The test to be conducted on a LAB Corporation or Gaynes Engineering Company heavy duty vibration testing machine.

(4) Conbur Test: This test to simulate humping, switching and sudden stops of common carriers by means of a Con-

bur testing machine.

NWPMA will grant approval by certification to competent independent laboratories to run these tests. Such laboratories would be certified on the basis of possessing all the necessary equipment to satisfactorily conduct pallet tests. Additional criteria will also be laid down for certification of laboratories by NWPMA.

Interested persons may obtain copies of the new Approved Tests for Evaluating Pallets upon request from most reputable pallet suppliers, or from the National Wooden Pallet Manufacturers Association,

609 Barr Building, Washington 6, D. C.

Remember that "Equivalent to NWPMA Grade Mark pallets" does not mean the same as NWPMA Grade Mark pallets. The Grades have no significance and contain no assurance of quality unless the Grade Mark containing the familiar diamond emblem appears on your pallets. It represents an economical, uniformly good pallet of sound construction. The NWPMA Grade Mark offers you the best in wooden pallets at the lowest possible cost. Remember, too, that the lowest price does not represent the lowest cost to you!

Copies of various technical literature, particulars on various technical services, and complete lists of member mills may be obtained by writing to the

following address:

NATIONAL WOODEN PALLET MANUFACTURERS ASSOCIATION 609 BARR BUILDING WASHINGTON 6, D. C.

"LOOK FOR THE GRADE MARK -IT IS YOUR GUARANTEE!"

D & M MOULDING CO., INC.

11320 N. E. Marx St. Portland 20, Oregon PHONE: ALpine 4-6583



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1650 Middle Harbor Road Oakland 20, Calif. PHONE: GLencourt 2-4570



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4085 Sheila St. Los Angeles 23, Calif. PHONE: ANgelus 9-9418



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THREADED NAILS INC.

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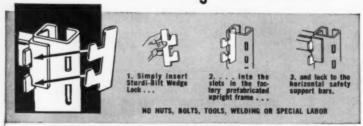
How's this for fast assembly?



... and for adjustability?



...it's done with **Sturdi-Bilt**"Float Wedge Construction"



RACKS FOR EVERY STORAGE NEED

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Attach this coupon to your letterhead or write: STURDI-BILT Dept. MHE-160. Material Handling Division

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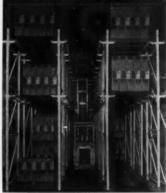
Circle 137 on Reader Service Card

IN-PLANT CONTAINERS

(continued)

Drive-In Racks

A line of prefabricated and adjustable storage racks features drive-in storage of palletized goods. The



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Speedrack Drive-In Material Storage Rack comes in prefabricated upright trusses and load beams. But they can quickly be assembled into a new rack with different dimensions. Nonstackable items can be stored to the warehouse roof. The structure is rigid enough to do without anchoring to floor, walls, or roof. A full tier of pallets can be stored above the rack.

Storage Products Corp.

6 Sizes Of Tote Box

Self-stacking hopperfront tote boxes now come in six sizes, from 1 through 5 cu ft. The light, low-cost boxes are



Circle 194 on Reader Service Card

of heavy corrugated made more rigid by chemicals. Contents of the boxes can be reached without disturbing a stack. The boxes stack solidly because of sturdy front and back shoulders. Convoy Inc.

Rail Steel Racks

High carbon rail steel forms storage racks of great strength. They can



Whatever your business, or your product, AIM Brand Slotted Angle will solve your toughest building and framing problems . . . and give you FREE MANPOWER HOURS. How? With this proven combination of AIM Brand Slotted Angle time and money-saving features . . .

- . exclusive AIM Brand Slotted Angle pattern of precision engineered slots and round holes gives unlimited design flexibility and ease of construction . . . for FREE MANPOWER HOURS.
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Send today for your AIM Brand Slotted Angle Idea literature. You'll learn how others are solving tough building and framing problems with AIM Brand Slotted Angle . . . while gaining FREE MANPOWER HOURS.

... are yours when you use AIM SLOTTED ANGLE

- arrow-shaped cutting marks every 3" give you a built-in measuring system for faster job planning and cutting ... means FREE MANPOWER HOURS.
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AIM Brand Slotted Angle is a product of the Acme Steel Company, U. S. pioneers in slotted angle framing material, and is backed by 7 years of on-the-job know how and laboratory testing, giving you an experience proved product. A nation wide network of distributors stock AIM Brand Slotted Angle and AIM Brand Slotted Angle Accessories.

Mail to: Dept. MJD-10
Fabricated Materials Division
Acme Steel Company, Chicago 27, Illinois

Yes! I would like to know more about AIM Brand Slotted Angle and how I can gain FREE MAN-POWER HOURS. Please send me AIM Brand Slotted Angle Idea literature.

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FAST! EMI air-row head FULLY ADJUSTABLE RACKS PALLET RACKS



- * EASY TO ERECT
- * ONLY 2 BASIC PARTS
- * SIMPLE TO ADJUST
- * QUICK TO RELOCATE

AIR-ROW Head Racks easily adjust to stack pallets, skids, dies and bulk of varying heights. Upright frames are tied together with sturdy steel support beams which quickly snap into AIR-ROW slots in the vertical post. Forge lock fittings on the ends of the support beams insure positive self-locking engagement with no sway or pop-out.

WRITE FOR OUR COMPLETE CATALOGI

YOU can stack or ship ANYTHING in any industry on EMI racks

EQUIPMENT

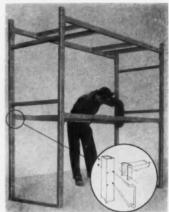
21552 HOOVER ROAD . DETROIT 5, MICHIGAN

Circle 42 on Reader Service Card

IN-PLANT CONTAINERS

(continued)

hold pallets, skids, dies, drums, bars, and bulk materials. The racks erect



Circle 195 on Reader Service Card and adjust easily, with a dual-angle positive locking device. There are standard sizes of rack or they can be made to order.

Met-Fab Inc.

Angle Cutter Weighs 18 Lb

A new one-man cutting tool for slotted steel angle weighs only 18 lb. It is more compact, easier to handle, and costs about half of what its 38-



Circle 196 on Reader Service Card

lb predecessor cost. The cutter permits easier and more accurate straight and angular cutting. The tool is for metal lumber for small buildings, storage racks, partition framing, carts, tables, ladders, work benches and others.

Berger Division Republic Steel Corp.

Single Wrench Does It

You need only one wrench to put up this slotted angle. That's because of a self-locking nut. The angle, for steel shelving and shop equipment, comes in baked enamel finish or galvanized. It also comes in heavy or



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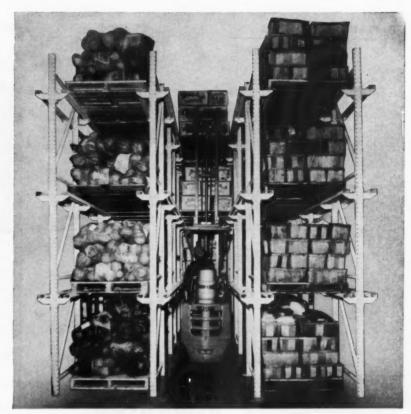
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NEWS!

from storage rack headquarters

speedrack®

The prefabricated Upright Truss is offered in depths of 2 to 6 ft., and in heights of 6 to 20 ft. They may be combined to erect a storage rack of any height, width and depth. Load Beams are available in a wide range of sizes.



WALL to WALL...FLOOR to ROOF... solid storage

... new "Drive-In" SPEEDRACK Eliminates Aisles in Storage Areas

"All PURPOSE..speedrack®"

Assemble Without Cutting, Bolting or Welding

Prefabricated, interchangeable SPEEDRACK Upright Trusses and Load Beams are used over and over. No waste for cutting or fitting. The exclusive SPEEDRACK locked joint forms a more rigid structure than bolted assemblies.

The SPEEDRACK Connector (A), shaped in a "U" . . . is inserted at any desired height on the SPEEDRACK Upright Truss (B).

Welded end plates (C) on the SPEEDRACK Load Beam drop into place over the Connector (A) . . . instantly locking the Load Beam to the Upright Truss and locking the Connector in place; as well.

Rapid assembly of "All Purpose SPEEDRACK" without tools holds erection labor, often, to less than 2% of the total cost. Full information on application of SPEEDRACK to your storage requirements will be sent without obligation.

REWARD . . . Suitable compensation, as described below is offered to persons knowing the whereabouts of storage problems not solved by old fashioned stacking of merchandise or by storage racks without exclusive SPEEDRACK features.

Please communicate at once. Your reward, the detailed recommendation by SPEEDRACK engineers for space-saving, low handling cost storage rack installation, will be forwarded without delay.

"Drive-In SPEEDRACK" assembles to meet your needs of overall height, width, and depth . . . from your stock of interchangeable Upright Trusses and Load Beams.

You secure maximum storage from every foot of floor space, yet protect merchandise from crushing . . . with the load carried on new "Drive-In SPEEDRACK". Waste space is eliminated and lift trucks enter either end to load through the full depth of the storage area.

No Fastening to Floor, Roof or Wall

The rigid "Drive-In SPEEDRACK" requires no external supports and eliminates overhead cross members to allow a full layer of pallets above the structure.

Storage capacity is doubled and quadrupled while stock is protected from crushing and moves in and out more readily.

In coolers and freezers, storage capacity is not only greatly increased by use of "Drive-In SPEEDRACK", but air circulates freely about every pallet. No external supports are required . . . not even fastening to the floor, which often causes damage to the insulation.

Actual case histories of interesting "Drive-In SPEEDRACK" installations are available. Write us, outlining your storage requirements.

WRITE Today . . .

for the SPEEDRACK catalog with complete listing of Upright Trusses, Load Beams and special purpose rack accessories.



4410 Oakton St., Skokie, Illinois

speedrack SAVES SPACE

Circle 126 on Reader Service Card

IN-PLANT CONTAINERS

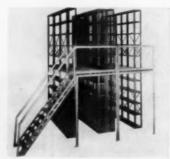
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standard duty types. Shelving is available with the slotted angle.

Frontier Manufacturing Co.

Floor Grating System

A floor grating system doubles shelf space in the same floor area. The system includes non-skid steel catwalks with access stairways. A second or mezzanine floor can be built even where no shelving exisits. Mass



Circle 198 on Reader Service Card produced interchangeable components keep costs low. Equipto Div., Aurora Equipment Co.

82-Lb Container

A light weight container of welded wire mesh holds up to 1,000 lb. It is self cleaning and fully collapsible. Di-



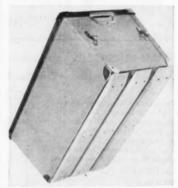
Circle 199 on Reader Service Card

mensions: 28" wide x 36" long x 24" high, weighs 82 lb. Its runners permit sledding when a lift truck is not available. This container, called the Lo-Tare, can be used for truck and air freight shipments.

Cargotainer Division Tri-State Engineering Co

Hardwood On Bottom

A conveyor type tote box comes with hardwood on the bottom for all types of conveyor systems. The hardwood is in 3-inch runners (pictured here) or a solid board securely riveted



Circle 200 on Reader Service Card

to the box bottom. These hard vulcanized fiber boxes have a reinforced, rustproof top channel, top and bottom corners, two metal reinforced hand holes, and four nesting stops to prevent jamming. The boxes can be finished in any outside color and can be numbered on all sides. The boxes are suitable for large chain store operations, large mail order houses, and industrial plants with inside conveyor systems.

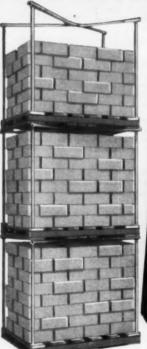
Federal Fibre Corp.

Bin Tilt Of Aluminum

A wholly aluminum tilt now is a standard item. This stationary hopper Tote Tilt has a stainless steel screw flight. The dual metallic construction of the discharge mechanism and use



TIER-RACK MAKES HIM





A QUICK-CHANGE ARTIST

... He Alters Your Layout in Minutes



Reach solid-stowed or high-tiered items in a few quick moves . . . change your storage setup in a hurry . . . when you use portable Tier-Rack pallet stacking frames.

Put idle aisles and empty air space to work, too...gain up to 50% more storage room in your present floor area.

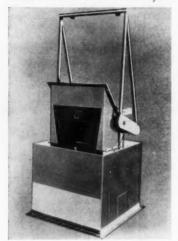
Send for booklet TR-8.

TIER-RACK CORPORATION

122 N. 7TH ST., ST. LOUIS 1, MO.

Circle 134 on Reader Service Card

of stainless steel protects against contamination. The tilt tips hermeticallysealed bins to 45°. With the air cylin-



Circle 201 on Reader Service Card

der stationary hopper tilt, the discharge mechanism remains fixed and the bin automatically elevates into position against a gasketed dust-tight hopper.

Tote System Inc.

Store In Steel Cabinet

A counter-high steel cabinet can be used to store supplies, records, tools, or dies. Placed next to a counter, its smooth top makes a useful working



Circle 202 on Reader Service Card

area. Dimensions: 36" wide, 24" deep, and 42" high, including a 4-inch base. Two shelves adjust on 2-inch centers. The cabinet is welded from 20 gauge steel. The doors latch at three points. Chrome-plated handles have a grooved lock that comes with two keys. Two standard colors are gray or green. Special colors are rose amber, spray green, vista green, saxe blue, warm gray, and sand.

Penco Div. Alan Wood Steel Co.

Cast Pallet Takes 18,000 Lb

A magnesium or aluminum cast pallet has an 18,000-lb capacity. There are two sizes: 33 x 40 inches weighing 19½ lb and 40 x 48 weighing 28 lb. The company is offering a plug caster which inserts in the corner



IN-PLANT CONTAINERS

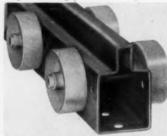
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Circle 203 on Reader Service Card posts. This forms dollies, pallet dollies, shop trucks, or trailer trains. Mag-Craft Corp.

Wheel Goes With Rack

A plastic wheel has been designed to go with a special live storage rack.



Circle 204 on Reader Service Card

Load-bearing capacity is greater because of the full 5%" flat tread of the standard two-inch wheel. The plastic wheels also are light weight and resistant to corrosion. The bushing permits permanent placement into the axle notch.

M-H Standard Corporation

Rack Goes Up By Hand

A boltless rack is assembled and adjusted by hand. Each shelf connection wedges vertically, front to back and side to side. The uprights



Circle 205 on Reader Service Card

are engaged by support beams in connector holes and driven into wedged position. It can be adjusted in height by driving out the beam and relocating on four-inch centers. Outsides of the uprights are smooth.

Hartman Metal Fabricators

Thinking About Expendable Pallets?

Here's a lightweight expendable pallet sturdy enough to hold 4,000 pounds of bagged products. It's made of cor-



Circle 206 on Reader Service Card

rugated paper reinforced with kraft veneer board. Sak-Pak pallets come in three sizes, weigh about 5 pounds each. They're shipped flat, but are easy to assemble with sturdy slots for forks. They can stack up to three high. Calco Supply Co.

SHELVE STORAGE PROBLEMS

WITH ERECTA-SHELF



SHELVING OF A THOUSAND USES

Erecta-Shelf assembles without nuts, bolts or special tools! Shelves and wprights friction fit quickly in place. It holds up to 1,000 lbs. per shelf and adapts easily to any length, height or depth requirement. Erecta-Shelf's strong steel rod construction permits free circulation of air without collecting dust or dirt, makes store rooms brighter, increases effectiveness of sprinkler systems. Write today for your free copy of the new Erecta-Shelf catalog.

BASKETS FOR INDUSTRY

Metro makes a complete line of baskets for small parts, material handling, plating, degreasing, etc. Immediate delivery from a complete stock. If meeded, baskets will be quickly tailor made to your specifications.

WRITE TODAY FOR A CATALOG!



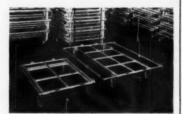
a quality product of

METROPOLITAN WIRE GOODS CORP.

N. WASHINGTON ST. and GEORGE AVE. WILKES-BARRE, PA.

Tubular Skids Can Change Size

No more making new skids for changing load sizes with the all-steel tubular Weldon skid. You can adjust both length and width by sliding 1'



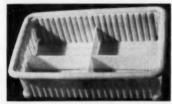
Circle 207 on Reader Service Card

steel pipes that telescope inside 1¼" pipe. They can't warp, splinter, or absorb water. Aluminum finish is rust-proof. They're originally designed for paper mills but can be used on other products as well. You can lease, rent, or buy them outright.

Weldon Industries, Inc.

Tough Plastic Box

A rigid polyethylene tote box is tough and strong but light in weight. It resists boiling water, may be steam



Circle 208 on Reader Service Card

cleaned, and retains strength at very low temperatures. It will resist acids, alkalies, and degreasing solutions. This tray stacks, has moveable partitions, and vertical side walls. Dimensions: 16" wide, 24" long, and 7" deep.

Forbes Products Corp.

Secures Pallet Rails

A quick connect T secures sections of pallet rails for drive-in and drivethrough rack systems. No tools or fas-



Circle 209 on Reader Service Card

teners are needed. Integral with the section is the RidgUrak double hook bracket. Rail sections snap over with a snug fit.

Bernard Gloekler North East Co.

... for Important DOLLAR-SAVING ADVANTAGES and CONVENIENCE in Storing and Shipping



Folding-STACKING BOXES









for Plant or Warehouse Use

Unique keyhole locking device and hinges permit boxes to be folded flat when not in use, se that four folded boxes occupy same space as one box in use. RESULT: More efficient use of valuable storage space, big savings in transportation charges by return of boxes folded.

Easy to Set Up and Fold.

To set up, simply lift sides that lock in keyhole slots for storing parts or other materials, lift and lower to fold. It's done in seconds by one man—no small parts, no tools needed.

Safe and Fasy to Stack.

- Safety pockets on corner posts permit stacking to desired height by fork truck, give rigid, no-sway support.
- Besides supplying the boxes in a standard eize, Palmer-Shile will engineer and manufacture these all-welded steel boxes to any specifications. Side drop-doors are optional, for utmost convenience in stock selection and checking.

Call your Palmer-Shile representative today, or write for complete information.

DESIGNED AND MANUFACTURED BY

Palmer Shile Co.

16012 FULLERTON AVE., DETROIT 27, MICH.

Offices in Principal Cities

EXPORT OFFICE: 75 WEST STREET, NEW YORK 6, N. Y.

Circle 86 on Reader Service Card

Circle 14 on Reader Service Card

THE VER-T-RACK

THE ACME OF VERSATILITY



- REDUCES WORK-ER FATIGUE
- MAXIMUM EFFICIENCY AT MINIMUM COST
- HEIGHT-651/2" LENGTH - 35" WIDTH- 24" CAPACITY 2000 lbs.
- SAVES MAN HOURS
 - SAVES FLOOR
 SPACE GREATER SAFETY

Equipped with 6" roller bearing steel wheel casters

VER-T-RACK can be handled with lift truck. Trays are adjustable on VER-T-RACK

PRICE - \$49.50 Varied Accessories Extra



IN-PLANT CONTAINERS

(continued)

Trays Are Smooth

A line of nesting-stacking trays has nesting stops riveted to each end to keep them from wedging tightly when nested. The trays have smooth, rounded lines with no protrusions nor sharp points. Anchored to the nesting stops are metal stacking arms that swing over the tray tops. These



trays weigh less than previous models and are smoother. They are made of vulcanized fibre, a chemically inert, odorfree, non-contaminating material.

National Vulcanized Fibre Co. Circle 210 on Reader Service Card

1-Size Container

A low cost, high quality container has 4,000 lb capacity. Its low cost is credited to mass production, single-size model, and elimination of various optional features. But the Scotsman sacrifices nothing in material or construction, ac-



cording to the manufacturer. It comes with eight-way lift

SOME CONTAINERS MAY SAVE YOUR LIFE



Lewis Containers WILL save your money



The LEWIS Stack-n-Nest® is the container you can best afford to buy. No other unit will give you more for your dollar . . . through superior design . . . rug-ged construction . . . and versatile, efficient handling. Every container is handled thousands of times in its lifetime. Based on only 2000 handlings, if Stack-n-Nest Pans can save 10 seconds each time, it amounts to better than 51/2 man hours. Translated into dollars and cents, the saving is greater than the initial cost of the average size pan.

Write for complete information.



Circle 66 on Reader Service Card



EADING FACTORIES, mills and institutions, after fairly comparing these TOUGH BABIES, now use them as standard equipment. Light, strong, easy-stacking or snug-nesting — true space misers that hold a heap and wear till the cows come home!

Expertly constructed, with side walls of

VULCANIZED FIBRE

a complete line of FIBRE Box Trucks and Disposal Cans Write for illustrated Catalog

Federal FIBRE CORPORATION

3704 Tenth St. Dept. 7 Long Island City I, N. Y.

truck entry, safe stacking legs, and fold-down feature which saves 75 per cent of return shipping or storage space. Size is 40 x 48 x 24 inches.

Union Steel Products Co.

Circle 211 on Reader Service Card

Fitting Slips On Easily



You can add units built of pipe without dismantling existing structures. Use a Slip-on Fitting. Fitting No. 110 slips over pipe already in place. It locks with a nut and bolt as part of the assembly. The hub end of the fitting slips over the newlyadded pipe and locks in-to rigid position by a set screw. The fitting can

support a direct load up to 4,000 lb. The fitting is for pipe sizes of 3/4" to 11/2". It is galvanized to match the other 57 fittings in the line.

Kee Klamps North America Ltd.

Circle 212 on Reader Service Card

Receptacles Are Flame Retardant

For plants with fire hazard, you can get flame retardant receptacles. They're made of Pyronil, a hard, smooth, vulcanized fiber, specially treated. Pyronil is widely used for electrical equipment. You can get Pyronil-made trays, pans, bins, boxes, floor trucks, baskets, and containers. They are light and strong.

National Vulcanized Fibre Co.

Circle 213 on Reader Service Card



- ONLY 2 BASIC PARTS ... QUICK ERECTION
- NO WEDGES ... NO BOLTS, NUTS, OR TOOLS REQUIRED SAFE ... RUGGED ... COMPLETELY ADJUSTABLE
- Easy access front or rear.

FAS-LOK Racks can be quickly assembled into unlimited combinations of height, length, and shelf opening. Rigidly braced end frames, in standard heights from 5' to 22' 6", have slots punched in uprights on 3" centers. Horizontal runners have hookplates at each end. Each hookplate has two tapered ears which fit slots of upright (inset). To assemble FAS-LOK Racks, ears are set into the wedge-shaped slots on upright and a tap on horizontal runner drives ears down seating them securely in a wedging action to produce down, seating them securely in a wedging action to produce a rock-solid rack. Can be used to store any material-Pallets, Skids, Rolls, Bulk storage, etc.

Horizontal runners available in lengths to 20 ft.; End Frames in depths from 2' to 5'. End Frames made in capacities to 40,000 lbs. Write for Catalog



CHICAGO TRAMRAIL CORPORATION 322 S. KOSTNER AVENUE, CHICA

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Circle 101 on Reader Service Card

PUMPS most anything*

HAT POURS! ALCOHOL CETAT *A few exceptions. Write for approved list. Take the risk and waste out of liquid transfer! This rugged Tok-

heim Hand Pump, with alternate diaphragms, handles most anything from diesel oil to acetatessafely, quickly, without spillage. Eliminates fire hazards and accidents, aids good housekeeping. Accelerates production, too. Pumps 20 gallons per 100 strokes. Get list above from your Tokheim dealer, or write direct today.

General Products Division

TOKHEIM CORPORATION

1668 Wabash Avenue

OKHEIM

Fort Wayne 1, Indiana

Subsidiaries: GenPro Inc., Shelbyville, Indiana; Tokheim of Canada, Ltd., Toronto, Ontario; Tokheim International, A. G., Lucerne, Switzerland





"HYDROWAY" Hydraulic Dynamometers are for practically all kinds of heavy duty weight and tension measurement for cable anchoring devices; equalizing guy-wire tension; measuring suspension bridge strain and for use as traction dynamometers. HUNDREDS OF USES: Such as Torque testing, Tensile testing, Traction testing. Can be used as a hanging scale for weighing, check weighing and inventory material weighing.

"HYDROWAY" Dynamometers are accurate; portable; compact; ruggedly built; maintenance free.

 CAPACITIES 0-5000 pounds to 0-10,000 pounds
 Dial diameter-6" • Weather proof • No oiling or fluid required • Permanently sealed • Economically priced

Guarantee: All "Hydroway®" Dynamometers are guaranteed to be free of defects in workmanship and materials.

Made by the originators of "HYDROSCALE®" (world's largest manufacturers of Hydraulic Crane Scales).

HYDROWAY SCALES, INC. 31292 STEPHENSON HIGHWAY • ROYAL OAK, MICH.

Circle 55 on Reader Service Card



ARE BUILT TO YOUR SPECIFICATIONS

As soon as you give us your process requirements, our Engineering Department prepares a basic design recommendation. A UHRDEN Sales Engineer will then meet with your engineers and go over the plans. Together, they will make sure that every mechanical element, every operating function and maintenance feature, meets with your approval.

Once the plans are approved, you get fast delivery on TUBAR Dumpers because we have a modern integrated assembly plant with complete stocks of components at hand.

TUBAR Dumpers are designed to handle a wide range of materials, including chemicals, food products, pigments, liquids, castings, stampings...everything that is emptied from drums, cartons, crates, or bins.

There's a stronger, safer TUBAR for every dumping job ... manual or electrohydraulic operation ... sizes for any lift height and load capacity. Explosionproof drives optional.

We'll be glad to design and build TUBAR DUMPERS to meet your specific materials handling requirements.

Write for Details

U-119-44



Circle 102 on Reader Service Card

IN-PLANT CONTAINERS

(continued)

Wire Basket For Small Parts

You can use this dipping basket for small parts, plating, degreasing, and other industrial handling. The line includes small parts baskets for overhead conveyors. The baskets have large or small mesh or expanded metal. Also,



baskets can be made to your specifications. The firm promises immediate delivery from a complete stock.

Metropolitan Wire Goods Corp.

Circle 214 on Reader Service Card

Store Small Parts Handily

Special cabinets are designed to store small parts, items that ordinarily take hundreds of man hours to find over a year. Standard models have 18 or 24 drawers each. And the drawers



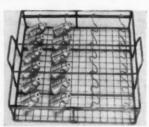
can be subdivided into smaller compartments by adjustable cross divided into smaller compartments by adjustable cross dividers. The cabinets are 34" wide, 11" high, and either 11" or 17" deep. They are all steel with green baked enamel finish.

Bay Products

Circle 215 on Reader Service Card

Rack Fittings Protect Units

A variety of differentsized racks are specially fitted to protect close tolerance, thin-walled small metal units during degreasing and work transfer. Wire holders fit inside the racks. The holders secure the products from touching each other or any part of the basket. The holders are



specially made for your product and are replaceable. The racks are 16 x 16 x 3½ inches, with carrying handles and a mesh floor. The racks will stack.

Wiretex Manufacturing Co.

Circle 216 on Reader Service Card

Assembly Bin For Small Parts

A molded plastic assembly bin is made of light, easy to handle, high impact plastic. It provides great speed and convenience in small parts assembly. Advantages: no magnetic interference, good thermal insulation, high abrasion resistance, no corrosion of paint, no refinishing required. It's ideal for electrical product makers. Bins may be stacked, tapered fronts providing semicircular arrangement. Sloping bottoms provide natural flow forward. Full width card holder on front lip gives easy, positive content identification. The bins can be arranged easily and quickly to suit changing requirements. There's one size for this Model A-10P: 8" long, 3¼" front width, 4½" rear width, and 2½" high. Standard color is gray.

Circle 217 on Reader Service Card



1960 FORECAST

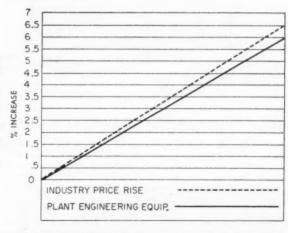
Plant Engineering Equipment

EQUIPMENT MANUFACTURERS PREDICT

Plant equipment changes. Covers many equipment types. Includes: doors, floors, stationary lifts, sweepers, etc. Manufacturers will redesign for more efficiency in '60. Have smaller plants in mind. Small plants need faster movement, placement of materials. In production, shipping, storing. Improvements in lifting equipment scheduled. Examples. Extra heavy duty lift for plate shears up to one inch. Automatic controls (limit switches, electric eyes) for lifts. Will make lifting more automated. Door developments predicted. A steel insulated overhead door. More simplified, inexpensive automatic door opening equipment. Sweeper improvements planned. More effective vacuum systems. Why? Plant standards of cleanliness have been raised in past few years.

What Will Plant Engineering Equipment Cost in 1960?

THE PLANT EQUIPMENT category contains too many diverse types of equipment to show real trends in price increases. According to the survey, manufacturers in this category were evenly divided as to whether or not their prices would be raised in 1960. Average of the affirmative replies indicated 6 percent increase, half a percent below the 6.5 average of the whole material handling equipment industry. But price increases were considered from the viewpoint that "manufacturers generally must make a special effort in 1960 to combat inflationary increases."

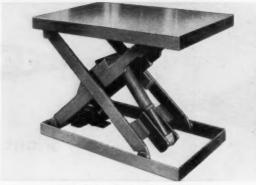


Plant Engineering Equipment

Automatically Controlled Production Lifts

Labeled the Porta-Lift line, this series of production lifts was designed to be purchased at lower costs, but engineered to retain all proved abilities of models already in operation. Series is available in an unlimited number of sizes and lifting capacities. Design versatility enables industry to utilize the Porta-Lift for any situation where a production lift may be required. Typical uses: in feeding, receiving, leveling, positioning for conveyors, stamping machines, presses, etc. Unit may be moved to any position needed and be put to work without any installation time or cost. Lift also can be lowered to barely inches above floor level when not in use to be out of the way. Flip-up top permits good accessibility for servicing. No-lubrication bearings are built-in.

Autoquip Corp.



Circle 218 on Reader Service Card

Sweeps Congested Areas

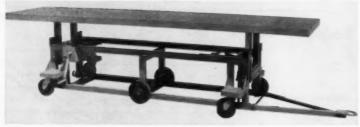
This walk-behind Tennant Model 40-E 33-inch sweeper is self-propelled. Specially designed for food plants, factories, laboratories, stores, and public buildings. Equipped with a cylindrical 26 inch main brush and a 17-inch rotary side brush. Machine cleans a 34-inch path. At top speed (1.9 mph) it has a reported capacity of about 25,000 sq ft per hour. Features: 5-min. battery change, high volume vacuum system, automatic stop, if handle is released, dual front wheel drive, 2,200 sq in dust filter. G. H. Tennant Co.



Circle 219 on Reader Service Card



Circle 220 on Reader Service Card



Circle 221 on Reader Service Card

Sheet Feeding Tables With Elevating Drive

Company has available an additional series of sheet feeding tables with an elevating drive. Unit incorporates the ball bearing screw operation through a chain and sprocket drive. These trucks, designated Steelmobile Senior, make available a greater range of sizes and capacities for sheet feeding operations, and for other applications that require a broad elevating top combined with easy portability. Capacities range from 4,000 to 10,000 lb. Top sizes can be had from 24 by 96 inches to 36 x 144 inches. Elevating range is nominally 24 inch minimum height to 40 inch maximum.

Jarke Mfg. Co.

High-Vacuum Hand Pump

Series 588 hand pumps has been introduced by this company as a companion line to its Series 688's. The new 588 is a lower cost high-vacuum, hand pump for petroleum products, with a horizontal counter. It operates with one instead of two diaphragms. It pumps up to 15 gallons per 100 strokes, and is built for rugged use. Counting mechanism is calibrated to the stroke of the pump. Counts up to 100 gallons per fill, and totalizes up to 10,000 gallons, measuring on a full or partial stroke. Features include a flexible diaphragm; stainless steel valve assemblies; and self-venting bung adoptor.

Tokheim Corp.

PLANT ENGINEERING EQUIPMENT & SUPPLIES

(continued)

2-Section Work Stand



The Hi-Lo Work Stand can be used where step platforms are impractical. Made in 2 sections, one section is hinged to the main section to give it a work height of 2 or 4 ft as desired. In either position, a flat work top is available. The unit is light, weighing only 120 lb. It's easy to move in any direction by two large rubber wheels. Can be obtained either in magnesium alloy or alu-

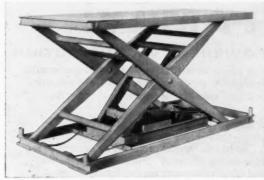
minum. Treated plywood tops are standard. Special metal work tops can be provided if required.

Forces Incorporated

Circle 222 on Reader Service Card

Self-Contained Lift Tables

For manufacturers with a handling problem involving long, and bulky or large, light loads. Company has added the LP Series of scissor-type, hydraulic-powered lift tables to simplify lifting, feeding and work-positioning of long



Circle 223 on Reader Service Card

loads for machine, process, or assembly operations. Models range from 1,000 to 6,000 lb capacity. Platforms range from 38 inch minimum width to 65 inch maximum width; from 7 ft 0 inch minimum length to 16 ft 0 inch maximum length. Collapsed heights range from 91/2 inch minimum to a 12 inch maximum. Vertical platform travel available up to 40 inch, but where required, can extend to 60 inches. The LP tables have no superstructure, are completely selfcontained.

Southworth Machine Co.

Overhead Transfer Automates Large Parts Handling

A new type transfer for the automatic transfer from machine to machine of large parts such as axle shafts and tanks. Basic section is a single box frame supported above the production line by several arch-type supports. The frame is cylinder-powered and rides on flanged guide wheels attached to the arches. The frame carries sets of hooks which ride the parts in process. Machine spindles and hook-sets are set at constant and equal intervals. Hook-sets are raised and lowered in unison by individual lift cylinders.

> Gear-O-Mation Div. of Michigan Tool Co.

Circle 224 on Reader Service Card

WHY IT PAYS TO USE

ubbair Xoor

the true door not a curtain.





One of several Rubbair Door installations at the Strath-West Springfield, Mass.



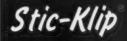
READ THIS ACTUAL CASE HISTORY

'The installation of Rubbair Doors has really solved three problems "The installation of Rubbair Doors has really solved three problems for us," said Mr. J. S. Mudgett, Chief Engineer, Strathmore Paper Co., West Springfield, Mass. "The first problem was the necessity for a door that would permit a freeflow of heavy fork-lift truck traffic without requiring a stop to mechanically operate a conventional type door. The second problem was considerable heat loss to open warehouse area which was reduced by fast closing action and air seals. The third problem was mainte nance costs which have been reduced because of the flexibility of the door. Of course, other benefits have been realized such as safety for workmen as well as a considerable reduction of dust and dirt from the loading platform." and dirt from the loading platform."

RUBBAIR DOORS Assure Trouble Free Operation With

- Flexible construction
- · Rugged V-cam hinges
- Safety-enshion nose Scuff-resistant wear panels
- · Positive air seal • Shatter-proof windows

If you have an industrial door maintenance problem, let us help you solve it. Write us the details or send for a free illustrated catalog.



MANUFACTURING CO., INC. RUBBAIR ® DOOR DIVISION 58 Regent Street Cambridge 40, Massachusetts

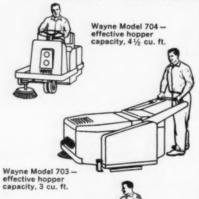
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MEW ADDITION TO WAYNE'S POWER SWEEPER FAMILY!

WAYNE MODEL 220 WITH POWERFUL VACUUM ACTION



For the big sweeping jobs in heavy industry—and wherever control of dust is vital to machinery, products or processes—Wayne now introduces the new 2 yard capacity Model 220 with powerful vacuum action!

Here is the perfect addition to the fine family of Wayne Power Sweepers for industry—the sweeper designed and engineered to clean *super clean*...to handle the dirt problems on acres of paved plant area with dollar-saving efficiency...to provide the power, maneuverability and effective capacity needed for the toughest industrial housekeeping jobs. *And in addition*, the Wayne Model 220 confines all dust inside the sweeper with a powerful vacuum action that supplements the sweeping action of the main broom and side brooms—eliminating any possibility of dust contamination inside and outside your plant.

Wherever dust is a problem in industry—in food processing, chemicals, aircraft, and many others—the Wayne Model 220 is the efficient, effective solution. It is another dollar-saving product of the world's largest manufacturer of power sweepers for cities and industry. Send the coupon below for full details!

Completing the Wayne Power Sweeper line are the 2, 3 and 4 cubic yard capacity models, all with water spray dust control. Full details are yours for the asking. Write today!

WAYNE

MANUFACTURING COMPANY

POMONA • CHICAGO • NEWARK Export: Henry R. Jahn & Sons, Inc., New York

Circle 109 on Reader Service Card

Wayne Model 706

effective hopper capacity, 15 cu. ft

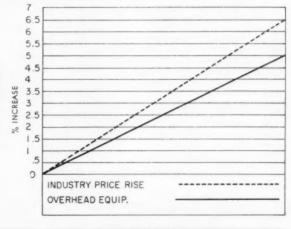


EQUIPMENT MANUFACTURERS PREDICT

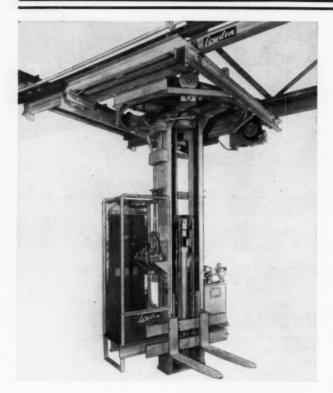
Automated controls. Predicted for crane and carriers in '60. Parallels information from engineered conveyor makers. Will reduce labor costs. Will increase accuracy of movement. Standardization will be a factor. Examples. New design swivel joints for overhead reels. Purpose: more models from one design, more applications. Vacuum lifter manufacturer will standardize models for more applications. Safety. Always a consideration of overhead equipment. Manufacturer will produce line of aluminum alloy fittings for wire rope and slings. Full range of sizes. Other developments. A 15 ton crane scale. Will meet requirements of National Bureau of Standards. Completely collapsible wire mesh belts. Can be sanitized with detergents. Use in food packing plants.

What Will Overhead Handling Equipment Cost in 1960?

THERE WERE MORE "no" replies than "yes" answers to the survey question of price increases. The margin, however, was not great, and was balanced by a quantity of "maybe" answers, based on theresults of the steel negotiations. Average of the predicted increases was 5 percent, compared to the overall material handling equipment industry average of 6.5 percent. First quarter was specified more than any other time of year for the increases.



Overhead Equipment



Light Hand Hoist

A light trolley hand hoist reduces headroom between hoist and trolley up to 50 per cent. Capacity range is 1,000 lb to 12 tons. The hand hoist combines in one compact unit a flexible trolley mounting with the Load King model hand hoist. The hoist goes on virtually any size or type of mono-rail. The four ball-tread wheels grip either curved or flat flange I-beams, providing good rolling with minimum wear on wheels and track. All bearings, ball for light hoists and tapered roller for higher capacity, have lifetime lubrication. Loads lift with efficiencies up to 95 percent. The hoist's light weight means easier maneuvering along the beam. Precision machined parts, accurate fits, and shielded ball bearings on all rotating shafts make for faster hoisting with less pulling effort and operator fatigue.

The Yale & Towne Manufacturing Co.



Circle 226 on Reader Service Card

Stacker Crane Speed Control Is Smooth, Infinitely Variable

A stacker crane with hydraulic fork lift features smooth, precise control. This model has two-ton capacity. Maximum hoisting speed is 20 fpm with infinitely variable speed control from a manual control valve. The mast rotates at 1 rpm and the trolley moves at 50 fpm by single speed fluid drive. The operator's platform, hydraulic pumping unit, and controls are placed at the bottom of the mast in this model. The platform, however, can be arranged to rise with the load.

The Louden Machinery Co.

Circle 225 on Reader Service Card



Circle 227 on Reader Service Card

Low Headroom For Hoists

A line of electric hoists in capacities of 1½ through 7½ tons now requires extremely low headroom. For example, the 5-ton model needs only 24 inches of headroom. The motor and control box are weathertight. Power comes from a 7½ hp motor with weatherproof brake. It's a magnetic motor brake of the multiple disc type with extremely short stroke travel. A four-position, weight-operated limit switch protects hoist and operator. These Type F3 hoists have extralarge diameter cable drums for increased lift and reduction of bending fatigue in the cable. Mounting options include floor, lug suspension, manual and hand-geared trolleys, motor driven trolleys, and suspension from patented monorail type trolleys.

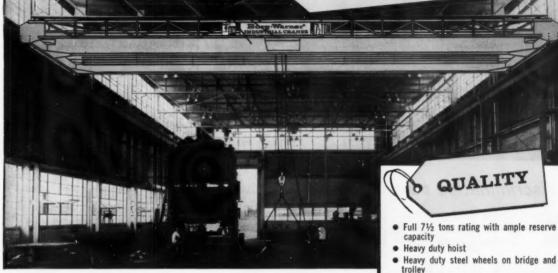
Robbins & Myers Inc.

Borg-Warner Industrial Cranes

Quality at a price you can afford...

990000

For a 71/2-Ton, 60 Ft. Span, 3 Motor, Top-Running Double Girder Industrial Service Crane



Why Borg-Warner Industrial Cranes are BETTER VALUES

Value is determined by QUALITY and PRICE . . . and, a price like this for superior Borg-Warner Industrial Cranes construction and performance assures you of top value for your materials handling investment.

If you want to boost your production and operating profits by making full use of overhead space for materials handling . . . if you can use the extra storage space an overhead crane will provide as compared with fork-truck stacking ... if you can benefit from aisles and work areas cleared of floor-type handling equipment . . . it will pay you to consider a Borg-Warner top-running, motor-driven crane like this. The cost may be far less than you had imagined. One crane owner thought it would cost him nearly four times this price to duplicate his crane.

Borg-Warner Industrial Cranes offers a complete line of overhead cranes . for light, medium or heavy service . . . constant or intermittent service at slow, medium or high speeds . . . operation from cab or floor. Get in touch with B-W Industrial Cranes today for answers to your materials handling problems.

- · Heavy duty steel wheels on bridge and
- · All welded jig bored and jig assembled end trucks
- · Long life precision ball and roller
- · Large gusset plates at end trucks
- Outrigger machinery girder construction
- · Heavy duty gear reduction bridge drive • Fluid coupled bridge and trolley drives
- · Full magnetic push button control
- · Magnetic bridge brake



The crane illustrated is a typical double girder installation. For shorter spans, smaller capacities and lighter or intermittent duty Borg-Warner Industrial Cranes can supply your needs at even lower prices.



Design it better ... Make it better.



Distributors in all principal industrial cities.

-Warner INDUSTRIAL CRANES

530 S. PAULINA STREET, CHICAGO 8, ILLINOIS Export Sales: Borg-Warner International, 36 South Wabash Ave., Chicago 3, Illinois

Circle 15 on Reader Service Card



... discriminating buyers choose

FEEDRAIL

Crane & Hoist Electrification Systems

- 1. ELECTRICAL SAFETY—Heavy gauge steel housing encloses copper bus bars, track-supported trolleys with positive polarization and uniform contact pressure, and every other provision making an electrical system safe and fool-proof is incorporated.
- 2. Personnel Safety-Metal enclosure protects plant and maintenance personnel. No dangerous bar conductors and accident-causing broken wires, trailing or strung cables.
- 3. DEPENDABILITY Rugged, precise construction, pays dividends in power continuity and maintenance-keeps cranes and hoists rolling!
- 4. ADAPTABILITY—Prefabricated runs may be of any length, straight or curved, with turntables, slide or tongue switches. Readily adaptable to suit changed conditions, every part re-usable.
- 5. COMPACTNESS—Single metal housing occupies less than half the space of open conductors or sheathed bars. Looks neat, too!
- 6. Easy Maintenance—Replacement of parts is negligible. Any part can be replaced without interfering with the rest of the installation.
- 7. LIFE-TIME USE—Never becomes obsolete! Assures power for the life of the crane or hoist. Outlasts other types of electrification.
- 8. Low Installation Cost—Nothing left to do on the job site but to connect units together—fast—because everything has been engineered to fit installation requirements. No special tools!

INFORMATION FOR YOU: Bulletins are available on Feedrail 60 Ampere Systems (90 Ampere Intermittent Service); 100 Ampere Systems (150 Ampere Intermittent Service); and Heavy Duty Systems of 225, 375 and 500 Amperes. See your local Electrical Distributor or write FEEDRAIL, Department F-1.



OVERHEAD EQUIPMENT

(continued)

Grips Up To 2,000 Lb

A vacuum lift with multi-seal gripper gasket can pick up rough textures like concrete and diamond tread plate as well as smooth surface items such as polished stainless steel and



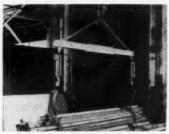
Circle 228 on Reader Service Card

glass. The Pressuregrip is used with an overhead crane or custom engineered for many automatic or semi-automatic operations. The basic components are a powerful motor, pump unit, and the gripper. The grippers come in standard sizes up to 25 inches in diameter. Lifting capacities range up to 2,000 lb for each gripper. A safety reserve tank maintains enough vacuum to hold a load for hours after power has stopped. Under-the-hook Pressuregrip units come in a variety of sizes and capacities up to 20 tons. Custom feeding equipment allows the system to perform many types of repetitive transfer operations. Cycles of less than 2 seconds are on record.

Whiting Corporation

Remote Chain Release

A solenoid chain release provides safety where it is dangerous for the worker to unhook the load. The Acco Solenoid Chain Release can be used with sling chains which carry bars, tubes, strips, and such. The crane op-



Circle 229 on Reader Service Card

erator pushes a button in his cab, activating the solenoids at the end of a spreader bar. This expels the chain from its hooks and releases the load. All loads, however, must be on the floor with tension removed from the chain before the solenoids work. Other safety factors: the load will not release even if the push button is



No Tripping!
No Injuries!
No Down Time!

with



APPLETON

AIR-LIQUID REELS



Eliminate Dangerous Hose Slack with APPLETON Reels

The hazards of tangled, twisted hose are completely eliminated when you install APPLETON Air-Liquid Reels. They automatically rewind to maintain constant tension on hose lines...yet give finger-tip supply from "out-of-the-way" source. Helps prevent costly employee injuries!

Investigate the advantages of APPLETON Air-Liquid Reels for your requirements...the finest for light or heavy duty work. A duplex model hose reel for oxygen and acetylene also available. All have universally designed roller outlet which provides continuous use of the hose without danger of pinching or tearing. If constant tension is not desired, reels can be equipped with a ratchet device which, with a slight tug on the hose line, allows it to rewind on the drum.

For full information, write for Air-Liquid Reel Bulletin 259

APPLETON ELECTRIC COMPANY

1701 Wellington Avenue

Chicago 13, Illinois

Circle 12 on Reader Service Card

OVERHEAD EQUIPMENT

(continued)

pressed accidentally or the power fails. The solenoid comes in single or double spreader bar models.

American Chain & Cable Co.

One-Piece Housing



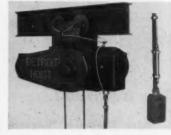
Circle 230 on Reader Service Card The hoists range from 500 to 12,000 lb capacities. Any motor with integral

disc brake can be used with the hoists. The mechanical load brake sets automatically the instant the hoist motor stops. The load lowers only by reversing the motor.

The Euclid Crane & Hoist Co.

Lubricate From Floor

You can lubricate an overhead hoist from the floor by using Safe-Lub. It carries lubricant from a fitting on the pendant control, through flexible ny-



Circle 231 on Reader Service Card

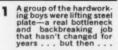
lon tubing, directly to trolley wheel bearings on the hoist. The system can be installed on any type of over-head hoist in minutes. It eliminates dangerous ladder climbing and reduces time required for lubrication. In fact, one man can do the job while the hoist is operating.

Detroit Hoist and Machine Co.

A Series S line of electric hoists features one-piece gear housing and frame of heavy steel. This is designed to stop misalignment and oil leakage.

VAC-U-LIFT VAN Solves another Material Handling Problem!







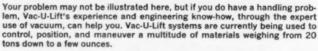
Along came VAC-U-LIFT VAN — Of course this problem was a natural since he had helped a lot of other industries with this same problem. 2



Back from the plant with a speedy quote . . . quick delivery of a unit, VAC-U-LIFT VAN has made a new group of friends.

VACUUM STEEL PLATE HANDLER

PLATE HANDLER
Prior to installation of the
same operation required
3 men for operation of the
crane and attaching
chains. The Vac-U-Lift unit
shown in photograph requires only one man for
complete operation which
means faster, safer and
more economical steel
plate handling. This unit
lifts and conveys over 4½
tons of steel plate and is
adaptable for use with
overhead traveling crane,
boom crane and stiff-leg
crane.



All Vac-U-Lift units carry a full 3 month unconditional warranty.



Send Today For FREE Illustrated Brochura

This brochure shows some of the many VAC-U-LIFT systems now in use. It explains how VAC-U-LIFT works and how you can take advantage of VAC-U-LIFT'S 3-step analyzation service without cost or obligation, write

DEPT. VL-90, VAC-U-LIFT CO., Salem, Illinois

Division of the Siegler Corporation

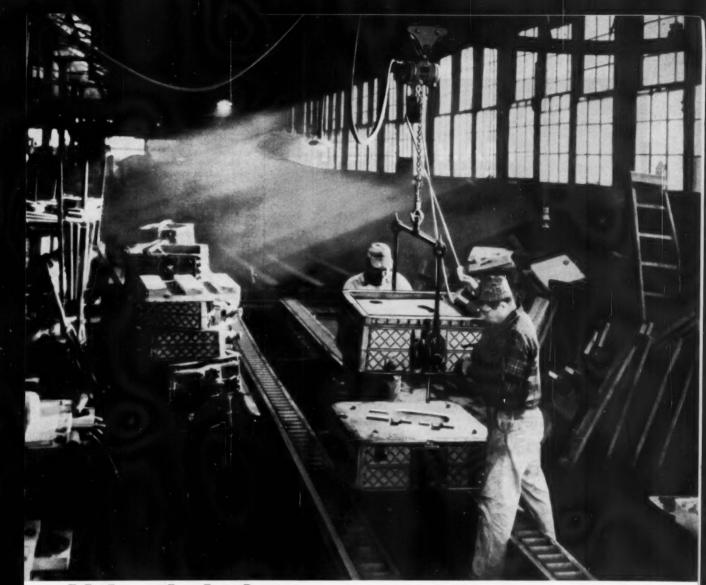
Handle Pulls Hoist

The Budgit portable electric hoist line uses pushbutton control for capacities of 250 to 4,000 lb. The molded fiber glass handle has an interlock, making it impossible to de-



Circle 232 on Reader Service Card

press the hoist and lower buttons at the same time. The control cord has a built-in strain reliever cable for pulling the load and hoist by the control handle. Two positive acting brakes can hold a full rated load singly in case of power failure. A reversing limit switch prevents overtravel of load chain either in raising lowering. Two-gear reduction, special roller chain, and a small di-



Yale air hoists have proved themselves ideal in every type of tough operation. They are especially safe for overhead handling in hazardous atmospheres. The air motor is explosion proof and cannot overheat. These light, compact hoists have constant speed control for smooth lift in either hook or trolley models. Capacities, ½ and 1 ton. Choice of roller or link chain, pendant or pull-cable control.

Contact your Yale distributor listed under "Hoists" in the Yellow Pages of your phone directory. Or write for brochure #5145A to The Yale & Towne Manufacturing Co., Yale Materials Handling Div., Dept. AH-5, Philadelphia 15, Pa.

Yale Materials Handling Division, a division of The Yale & Towne Manufacturing Company. Manufacturing Plants: Philadelphia, Pa., San Leandro, Calif., Forrest City, Ark. Products: Gasoline, Electric, Diesel and LP-Gas Industrial Lift Trucks Worksavers · Warehousers · Hand Trucks · Industrial Tractor Shovels · Hand, Air and Electric Hoists.

YALE

INDUSTRIAL LIFT TRUCKS
TRACTOR SHOVELS • HOISTS

YALE & TOWNE



square feet of "SPACE"

SAVED with a MANSAVER SHEET GRAB...

We can cite many cases where Mansaver Grabs have actually eliminated the need for new buildings by utilizing every inch of floor space.

One large business machine manufacturer states: "Existing floor space allocated to punch press flat stock storage amounts to 2,225 square feet. Without the Mansaver Grab, we would have needed double the floor space, or at least 2,300 to 2,800 additional square feet. The Mansaver we are using has meant a savings in operations area available for other purposes. Since the value of floor space in this part of the factory is about \$10.00 per square foot, dollar savings amount to approximately \$25,000.00." The grab cost only \$1,235.00.

Whether your plant handles metal sheets, coils, palletized or skid-loads, bars, billets, rods, tubes, boxes, bales, barrels or other similar materials, Mansaver can supply a manual, semi-automatic, fully-automatic, or power-operated Grab to do the same for you.

Ask our District Engineer into your plant to study your handling problem for presentation for our solution.



Also Manufactured in England by George W. King Co. and in France by Ets. Dujardin et Cie Circle 72 on Reader Service Card

OVERHEAD EQUIPMENT

(continued)

ameter lifting sprocket with only six teeth made this hoist efficient and accurate.

Shaw-Box Crane & Hoist Division Manning, Maxwell & Moore

Plastic Switch Box

A Safe Pendent Switch, two-button model, comes in molded twopiece plastic. This is to keep it watertight and electrically insulated. The



Circle 233 on Reader Service Card switch keeps out water, dust, and grime, and is not affected by oil or acids. The switches, for circuits up to 460 v, 20 A, are of precision snapaction type. The manufacturer calls it virtually maintenance-free. There

also are four- and six-station units.

Joy Manufacturing Co.

Lift For Rail System

A lifting device, installed on any trolley or rail system, has vertical speeds up to 400 fpm. You lift or



Circle 234 on Reader Service Card

push down on the control handle to make it work; there are no buttons to push or cords to pull. Operating on shop air pressure, it will lift loads up to 200 lb.

Servo Lift

(Continued on page 103)

CATALOGS and BULLETINS

offered in advertisements in this publication

The Trackmobile runs . . . on the road or on rail for switching, spotting, and hauling. To see how it can save you money, write for a folder from Whiting Corp.

Circle 108 on Reader Service Card

Controlled dumping . . . with dropbottom boxes reduces costs and increases efficiency. Write for details from The Union Metal Manufacturing

Circle 105 on Reader Service Card

They needed only one-third the workers . . . after installing a vacuum plate handler. Vac-U-Lift Co. tells how it's done in an illustrated brochure. Circle 106 on Reader Service Card

You can have . . . a dumper built to your specifications. The dumper will handle everything that empties from drums, cartons, crates, or bins. Details from Uhrden Inc.

Circle 102 on Reader Service Card

Complete use . . . of all storage space at all times is possible with the Triax Retriever System. Write for information on true random storage. Circle 100 on Reader Service Card

A truck will stack . . . in aisles only 6 ft wide, from 4 to 6 ft narrower than usually required. For more about this "Naro-Aisle-Stack" truck, write the

Towmotor Corp.
Circle 115 on Reader Service Card

Pick the right hoist . . . to reduce handling costs. Shepard Niles Crane and Hoist Corp. will tell you whether you need a floor-operated hoist or a cab-operated hoist.

Circle 98 on Reader Service Card

It's easy and convenient . . . to seal 34-inch steel strapping with one hand. Try a pneumatic sealer with a pistol grip. Send for a booklet on Signode Steel Strapping Co.'s tensioners and

Circle 93 on Reader Service Card

A true door, not a curtain . . . that's a warehouse door that permits a free flow of traffic with minimum heat loss. The Rubbair Door Division of Stic-Klip Manufacturing Co. has a free illustrated catalog.

Circle 97 on Reader Service Card

Simply measure and cut . . then assemble with ordinary bolts and nuts to solve framing problems. Republic Steel Corp. has four booklets on this and other handling problems. Circle 120 on Reader Service Card

Less operator fatigue . . . is the claim for a light hydraulic pallet truck built to withstand years of use and abuse. The Raymond Corp. will send you a bulletin.

Circle 117 on Reader Service Card

Data sheets . . . from Mid-States Gummed Paper Division, Minnesota Mining & Manufacturing Co., can help you tell whether your packaging de-partment is scientifically organized.

Circle 79 on Reader Service Card

Less cost in the long run . . . for Edison Storage Batteries. To find out why, write for a booklet on longer life batteries with greater durability.

Circle 78 on Reader Service Card

Easily-changed attachments . . . with one basic unit can mechanize your handling. Write Kwik-Mix Co. for facts on fork lifts.

Circle 65 on Reader Service Card

Big machine features . . . go with a portable stapler from the International Staple & Machine Co. Send for a free

Circle 61 on Reader Service Card

Dozens of protective features . . . come with a 2,500-lb capacity tractor shovel. Ask for more data from the Frank G. Hough Co.

Circle 54 on Reader Service Card

Reduced tape curl . . . makes the entire roll of gummed tape usable down to the core. Several booklets are available from the Gilman Paper Co.
Circle 119 on Reader Service Card

Keep production rolling profitably . . . with regular ccorrugated containers or engineered packaging. Gaylord Container Division, the Crown Zellerbach Corp. will give you more infor-

Circle 49 on Reader Service Card

No taste imparted . . . to the product handled by B. F. Goodrich Co. hose. For more on rubber products, write for literature

Circle 51 on Reader Service Card

You need only one tool . . . for production line strapping. It tensions, places seal, seals, and scores strap for easy break-off. Write for specifications from A. J. Gerrard & Co. Circle 25 on Reader Service Card

Longer life . . . is due to heat treatment after welding on magnesium dockboards. Send for a folder from Brooks & Perkins Inc.

Circle 16 on Reader Service Card

The proper chain drive . . . can be had by consulting with ACME Engineers. Write for a 100-page catalog which includes 36 methods of chain

Circle 1 on Reader Service Card

Pallet-loads arrive damage free . . after coils are strapped by a pneumatic stretcher. For more on this and other systems, write Acme Steel Co.
Circle 2 on Reader Service Card

There are savings . . . from use of Allis-Chalmers lift trucks. You can get a series of case studies by writing the

company.

Circle 5 on Reader Service Card

Fuel economy . . . comes with the McClain System of carburetion for LP-Gas. A descriptive brochure is available from the Peacock Corp. Circle 500 on Reader Service Card

Long life and low maintenance cost ... are features of a platform truck. Send for literature and specifications from the Lansing Co.

Circle 68 on Reader Service Card

Hundreds of uses . . . can be made of a hydraulic dynamometer. These include torque testing, tensile testing, traction testing, weighing, check weighing, and inventory material weighing. Send for details from Hy-droway Scales Inc. Circle 55 on Reader Service Card

A 10-ft-long skate wheel conveyor ... weighs only 28 lb. For more on this conveyor, write Gee-Vee-Line. Circle 499 on Reader Service Card

For readability of shipment addresses . . . try machine cut stencils. Write for a free booklet from Diagraph-Bradley Industries Inc.
Circle 37 on Reader Service Card

Improved mechanical efficiency . . is the word on a Rockwell-Standard Corp. brake. Write for a brochure to get full details. Circle 498 on Reader Service Card

READER SERVICE SUMMARY

Subject Index of Items Advertised in this Issue

The following is a listing of advertising matter classified by subject and listed by page number. For information on any item listed here, first refer to the page and then circle the Reader Service Number on the attached business reply card.

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Battery charger	Pallet trucks 59
Belting, conveyor 42	Platform body for hand truck 58
Box trucks	Platform trucks
Canvas truck top	Power units for trucks
Car door opener	Powered industrial trucks & attachments 7, 9, 11,
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Corrugated containers	Reel, hose
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812 HURON ROAD • CLEVELAND 15, OHIO



PLEASE PRINT Kind of Business Position January, 1960. Do not use after 4-15-60

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INFORMATION AND

ADDITIONAL

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Zone

Kind of Business

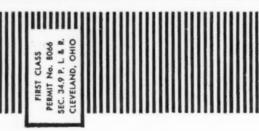
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CLEVELAND 15, OHIO . 812 HURON ROAD



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January, 1960. Do not use after 4-15-60

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Street

SEC. 34.9 P. L. & R. CLEVELAND, OHIO

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FIRST CLASS

City

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BELOW.



MATERIAL HANDLING ENGINEERING

CLEVELAND 15, OHIO 812 HURON ROAD

OVERHEAD EQUIPMENT

(continued)

Rotaries Lift Fast

Two rotary hoists have been added to a line of piston-motor hoists. Most parts of the fast-lifting rotaries can interchange with the piston types.



Circle 235 on Reader Service Card

The 86R-10 rotary has a capacity of 1,000 lb and lifts at 40 fpm. The 86R-20, with 2,000-lb capacity, lifts at 20 fpm. Standard equipment includes a safety suspension hook, safety load hook, roller or link chain for 8

ft of lift, rope control, swivel air inlet, air strainer, and safety stops.

Gardner-Denver Co.

Overhead System Flexible

An overhead chain conveyor system is rated as extremely flexible, equally adaptable to level or multi-



Circle 236 on Reader Service Card

plane systems and may be added-on to systems of similar design. The rivetless chain is supported by trolleys which roll on the lower flanges of a four-inch I-beam track. Horizontal turns are supported by a series of rollers or wheels. The track absorbs vertical bends.

Richards-Wilcox Mfg. Co.

New Line For Load Gripping

A new line of below-the-hook load gripping devices has been devised. The line takes in plate lifting clamps, tongs, hooks, and grips. Five types of Circle 92 on Reader Service Card





As Little as \$285 Makes Your Hoists and Cranes Into Fork Lifts



You can now handle pallet, coil and other unit loads where fork trucks are too expensive or impractical. America's foremost industries are saving thousands of dollars in first cost, handling cost, operating cost and maintenance cost with Cady Pallet

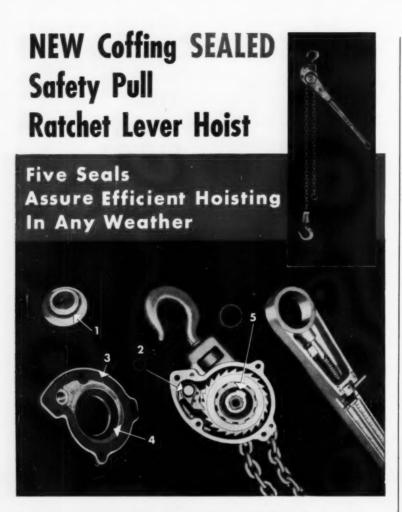
Lifters. Repeat orders are proof of satisfaction. Counterbalanced to hang level, they are easy to use and reduce non-productive handling costs in plants, in yards, on docks and on job sites. Standard Pallet Lifters up to 10,000 lbs. capacity, Coil Lifters up to 40,000 lbs. capacity. Custom models to fit special conditions. Write or phone JAckson 4145.

CADY METAL FABRICATING, INC.
78 Schenck St. N. Tongwanda, N. Y.
Circle 19 on Reader Service Card

SUPPLEMENTARY READER SERVICE CARD

Many readers have reported that their copy of Material Handling Engineering sometimes arrives without the Reader Service Card. This may be caused by others in the plant who see the magazine first, tear out and use the card and pass the magazine on. If this copy reaches you without a Reader Service Card, use this supplementary coupon to obtain additional information from the manufacturer on any advertisements, new equipment, useful literature, etc. CAUTION: This must be mailed first class in a sealed envelope.

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2	47	72 73	97	122	147	172 173	197	222	247	272	297	322 323	347	372	397 398	422	447	472 473	497
23	49	74	98	123	148	174	198	223	248	274	298	323	348	374	398	424	448	474	498
25	50		100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500



Here is a new hoist designed for safe, efficient hoisting in any weather. Loads will not slip because the brake mechanism of the Safety Pull Hoist is permanently sealed in five places against moisture, oils, chemicals and dirt—all common causes of hoist slippage.

The spring-loaded Neoprene seals assure that brake performance will remain constant under all exposure conditions. Another advantage of the sealed brake is that it will not freeze or lock—is always free to lower even after accidental overload.

Safety features include the exclusive Safety Handle which bends to

indicate overload. The free chain control is protected so that it will not accidentally trip.

The Safety Pull Hoist is easy to operate. The handle pull to lift rated load requires minimum effort. Load spotting is precise to within a fraction of an inch. Up and down controls are away from operator's hand so he can use shorter leverage for greater speed with light loads. Ball bearing swivel load hook and plated chain are additional features.

Five models, %, 1½, 3, 4½ and 6-ton capacities are available. For additional information ask your distributor or write for Bulletin ADH-78

COFFING HOIST

DIVISION OF DUFF-NORTON COMPANY

821 Walter Street . Danville, Illinois

COFFING HOISTS
Ratchet Lever • Air
Hand Chain • Electric



DUFF-NORTON JACKS

Ratchet • Screw
Hydraulic • Worm Gear

Circle 18 on Reader Service Card

OVERHEAD EQUIPMENT

(continued)

plate lifting clamps come in 1,000 to 40,000 pound capacities. Tongs are in six specific types, for crates, pipes,



Circle 237 on Reader Service Card

rails, beams, timber, and drums. There are box and trip hooks. Grips handle barrels, drums, kegs, and boxes, some for lifting, and others of the swing type.

Shaw-Box Crane & Hoist Div. Manning, Maxwell & Moore, Inc.

How To Set Tension

A Dynamometer can be used to set slip-clutch tension on conveyor systems. The gauge is set to the predetermined pounds of tension af-



Circle 238 on Reader Service Card

ter it has replaced one or two links. Then, after the test, a comalong is used to free the instrument. The Dynamometer, with capacities ranging from 500 to 100,000 pounds, can be used on nearly any type of conveyor system as a safety test, measurement of tension or for resetting the slip-clutch.

W. C. Dillon & Co.

Grab Band Split

A barrel grab, for either steel or paper drums, can be suspended or used with a lift truck. The back band is solid. But the split front band has a cam lock which tightens the entire band around the drum. AA side handle helps in turning the drum. A locking bank holds the load



Circle 239 on Reader Service Card

in vertical position or 45 degrees below horizontal.

Mansaver Industries Inc.

Duct Covers Trolley Wires

A trolley system covers all live parts, eliminating the hazard of exposed crane trolley wires. It can be adapted to any new or existing in-



Circle 240 on Reader Service Card

stallation. The system features a neoprene duct which is clipped to the wire. The trolley shoe passes through a self-closing slot. No live parts are exposed. These ducts can be used outside as well as indoors. No maintenance is needed because there are no wearing parts.

Industrial Div., Northbrook Products Inc.

Wire Rope Hoist Line

The "Balanced Design" Hevi-Lift line is claimed by the manufacturer to be the most complete line of standard, wire rope, electric hoists ever offered.



Circle 241 on Reader Service Card

The line includes hoist with lifting capacities from 2000 pounds to 50,000 pounds. There are models with hook, lug, plain, hand-geared, or motordriven trolley mountings, with standard or low headroom arrangements, as well as base, wall, ceiling, or deck

mountings. A standard 3-ton, low headroom, single speed unit is illustrated.

Harnischfeger Corp.

Heavy Duty Chain

A heavy duty bundling chain is suitable where high chain yield points are required and where crushing loads are encountered. The ACCO Armored Chain is made from low carbon steel. Among its properties: non-kinking, will not crush (good for slab and billet operations), has the same working load limit as high carbon, high test chain, is unaffected by high temperatures.

American Chain & Cable Co.



Circle 242 on Reader Service Card

SAVE

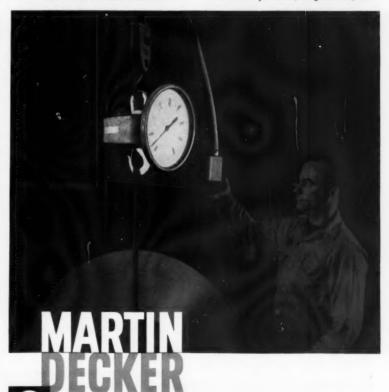
HUNDREDS OF DOLLARS
IN MATERIALS
HANDLING COSTS
IN EVERY INDUSTRY

the MARTIN-DECKER

SENSATER CRANE SCALE

easy to read, easy to handle, more convenient, safer, accurate...cuts work in half, lift and weigh in one easy operation. Reduces manufacturing, storage, shipping, and receiving costs.

Martin-Decker Corporation Dept. N-28 3431 Cherry Avenue, Long Beach 7, Calif.



Write for Descriptive Bulletin

Industrial Weighing, Load Measurement and Recording Instruments
Circle 81 on Reader Service Card

WHICH HOIST

fits your plant's needs?



SHEPARD NILES
FLOOR-OPERATED HOIST

Operator primarily occupied with other duties. Uses hoist for fast, efficient handling of relatively short hauls.



SHEPARD NILES
CAB-OPERATED HOIST

Operator in cab moves loads along at high speeds, occupies best vantage point for spotting and stacking material.

THE RIGHT HOIST • • • can reduce your plant's handling costs. But which one is best for the job . . . a floor-operated hoist where the operator is freed for other duties or a cab-operated hoist where he is engaged fulltime moving loads through the air? Because Shepard Niles manufactures both types of hoists . . . as well as a complete line of cranes . . . we can approach your handling problem with an open mind.



2788 Schuyler Ave., Montour Falls, N.Y.

Circle 98 on Reader Service Card

OVERHEAD EQUIPMENT

(continued)

Tongs for Handling Wood

Non-automatic tongs for pulling wood sheet piling and lagging have five teeth that bite into the wood.



Circle 243 on Reader Service Card

Jaws are shaped to get the most surface against the pile. The tongs have a 10,000 pound capacity and a jaw opening of three inches. A link at one side holds the jaws open when the tongs are lowered over a load. When the line is slacked, the link drops out; the jaws close on the piling firmly.

Heppenstall Co.

Air Hoist Takes 15 Tons

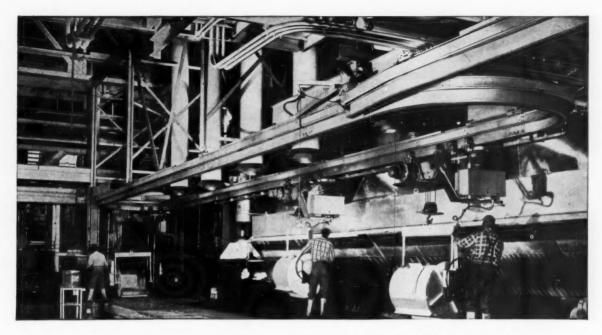
A line of air-operated, cable-type hoists is found in capacities from 1 through 15 tons. These are designed



Circle 244 on Reader Service Card

for applications where electric motors are not usable. Among the advantages: infinitely variable lifting speeds, one-hand pendant control cord, motor replacement virtually eliminated and ability to service while suspended in air.

Shaw-Box Crane & Hoist Div. Manning, Maxwell & Moore Inc.



Here's a way to make your lost ceiling space pay off

AMERICAN MONORAIL



Floor space is unobstructed, free of traffic with American MonoRail overhead handling.

increases plant capacity... cuts handling costs... reduces worker fatigue... minimizes damage and loss.

You can get more profit out of your plant. American MonoRail Engineers can show you how to convert lost ceiling space—eliminate obstructive storage around machines—and gain additional operating area. Find out how you can process work in motion, cut down idle time, and assure safe handling of product. Work can be done at comfortable heights—worker fatigue lessened—heavy loads eliminated—and damage to product reduced.

Let American MonoRail Engineers plan your handling. Write for full information today.

ENGINEERED MATERIALS HANDLING

1129 EAST 200th STREET CLEVELAND 17, OHIO



AMERICAN MONORAIL

MEMBER OF MATERIAL HANDLING INSTITUTE AND MONORAIL MANUFACTURERS ASSOCIATION
Circle 10 on Reader Service Card

JANUARY, 1960

OVERHEAD EQUIPMENT

(continued)

Sling Handles Gently

You can get Gripper Slings with a clear polyvinylchloride covering to keep the load surfaces free from dam-



Circle 245 on Reader Service Card

age. The clear PVC coating allows you to inspect the metal-mesh fabric inside. The covered slings can be used in corrosive acids (chromic, hydrochloric, hydrofluoric) and caustics (ammonium hydroxide, sodium hydroxide, copper sulphate).

The Cambridge Wire Cloth Co.

Heist Line Takes 1/2 to 3 T

Twelve models of Quik-Lift electric hoists have capacities from $\frac{1}{2}$ to 3 tons and speeds of 9 to 36 fpm. There's



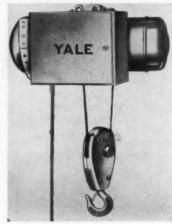
Circle 246 on Reader Service Card

push button control as well as pendent control. Both permit precise spotting with load movement of a fraction of an inch. Totally enclosed gear housings eliminate grease leakage. Permanent grease lasts the lifetime of the hoist. The dual voltage motor is heavy duty, with high starting torque. It will not overheat under normal service with full loads.

Coffing Hoist Division Duff-Norton Co.

Hoist Control Babies Load

The Selectron AC electric hoist control makes the hoist operate from slow creep to full speed under both on load and full load at near absolutely constant speeds. Manufacturer says this moderate cost development gives hoisting smoothness with varying loads which was previously possible only with more expensive direct current control systems. Heart of the system



Circle 247 on Reader Service Card

is a squirrel-cage motor used with conventional control components. Control unit requires no secondary controls, accelerating relays, or load resistors.

Yale & Towne Mfg. Co.

For information on any item advertised in this issue, use the Reader Service Card on page 101. All in-quiries are handled promptly and efficiently by our Remington-Rand de-

"Bridge" the cost gap with a NEW on your PRESENT CRANE BRIDGE!

If your present overhead crane facilities require attention, it may be wise to investigate the possibilities of a crane remodeling job with new Euclid trolleys; available in a range of designs and capacities.

We can specifically cite instances where this plan has been employed to the complete satisfaction of the crane owners.

This Heavy Duty Series "M" trolley incorporates a three reduction spur gear hoist. Recommended for use on cranes subjected to continuous operation in the handling of heavier loads.

This submerged crane trolley is designed to meet the low headroom conditions which are more prevalent in existing low buildings today with the wide use of air conditioning in many industrial plants.

A Series "H" top running trolley with a worm gear drive used in double girder cranes in capacities of 3 to 15 tons.



THE EUCLID CRANE & HOIST CO. 1361 Chardon Rd. Cleveland 17, Ohio

Circle 132 on Reader Service Card



JANUARY, 1960

ings, all wire ends are covered by the tapered sleeve. Further, the compact sleeve does away

Circle 121 on Reader Service Card

John A. Roebling's Sons Division
The Colorado Fuel and Iron Corporation

Roebling
"Flatweave"

Slings

OVERHEAD EQUIPMENT

(continued)

10-Jet Lubricator

A 10-jet lubricator gives positive lubrication to eight wheels and two ball-and-socket joints of American



Circle 248 on Reader Service Card

Chainless conveyor trolleys. The system shoots oil into wheel bearings and joints with minimum loss and dripping. The lubricator operates under some 40 lb of air pressure.

Conveyor Division, The American MonoRail Co.

Absorbs Shocks

A chain shock absorber combines the cushioning of special rubber and the strength of alloy steel chain. The rubber is bonded to the chain with links in contracted position. This takes place under heat and pressure in a special mold. The rubber is under shear, compression, and



Circle 249 on Reader Service Card

tension in different sections of the shock absorber as it works under load. The shock absorber requires no maintenance.

Brandon Equipment Co.

Oils, Greases Trolleys

An automatic conveyor lubricator with a universal head can service trolleys of various makes on the same conveyor. It handles either oil solid injection. The selfcontained lubricator mounts on a trolley rail. As the trolley wheel approaches the lubricator, the wheel engages the nozzle of the pumping

unit. This unit automatically contacts the grease fitting. The trolley wheel carries the nozzle with it. When the nozzle points straight at the trolley, a measured amount of lubricant discharges under pressure.

J. N. Fauver Co.

Circle 250 on Reader Service Card

No-Teeth Clamp

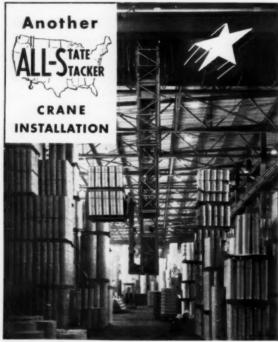
A non-marring clamp lifts stainless steel, copper, aluminum, and other polished metals. Model NM has smooth jaws with no teeth. Positive grip comes from a finger-adjustable wedge on one side of the jaw



Circle 251 on Reader Service Card

and a 5-to-1 gripping ratio on the other. The clamp has a safety factor of 3-to-1. The clamp locks or unlocks by a wedge-screw. The lift comes in capacities of ½ to 12 tons, with other sizes on request.

J. C. Renfroe & Sons

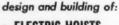


· Write for FREE Stacker Crane Bulletin No. 458

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Consult us on the



- ELECTRIC HOISTS
- AIR HOISTS
- MONORAIL TRACTORS
- CAB HOISTS
- TRAVELING CRANES

Ask for catalog 795



DETROIT HOIST AND **MACHINE COMPANY**

8211 Morrow St., Detroit 11, Mich.

DESIGNERS AND MANUFACTURERS SINCE 1905

Circle 36 on Reader Service Card MATERIAL HANDLING ENGINEERING



1960 FORECAST

Packaging Machinery

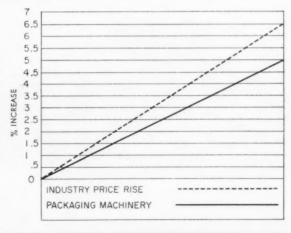
EQUIPMENT MANUFACTURERS PREDICT

Packaging machinery must keep pace with automation in '60. Because it is tied closely to production line. Increased speeds in packaging predicted. More automation when possible.

Parts marking, for example. Manufacturer says: more automatic feeding of micro-miniature electronic parts for marking. Also other small size, large volume items. Fills needs in electronics industry..... Other plans. More automatic devices to place shipment addressing stencils on forms. And an electric nail gun in '60. To compete with compressed air models.

What Will Packaging Machines Cost in 1960?

A HEAVY MAJORITY of packaging machine manufacturers said MHE's survey that there would be price increases in their products in 1960. And the increases would be pretty well balanced between the first and second quarters. Average increase mentioned was 5 percent, which is one of the lowest received (average increase for the whole material handling industry: 6.5 percent). Price of steel is a factor in these price predictions, as with those of other equipment manufacturers.



Packaging Machinery

Automatic Twine Bundling Machine Cuts Tying Costs



Circle 252 on Reader Service Card

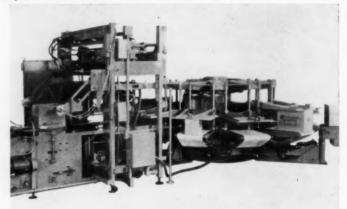
Built for heavy-duty, high-speed twine bundling, the Tymaster automatic bundling machine can cut your tying costs for newspapers, magazines, corrugated boxes, paper and multiwall bags, etc. It ties up to 15 packages a minute. You can install it into existing production lines, or move it about on its casters from one line to another. Compression is adjustable to meet the needs of any type of product—even delicate items. The machine takes packages up to 24" high and 38" wide. The ball of twine fits snugly into a compartment inside the machine, and twine is most commonly used, but you can use other twine materials as well. Because of the radically new spiral wire joint it puts in the twine, the machine insures retention of more than 90 percent of the strength of the twine. That means you can save more than 40 percent in twine costs.

United Shoe Machinery Corp.

Case Sealer Adjusts Itself for Mixed Box Sizes

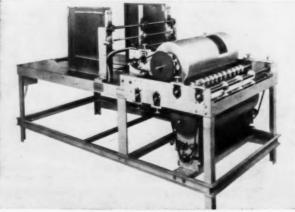
You can seal corrugated cartons in any order, regardless of size, completely automatically with the Packomatic Omnimatic-Rotopress. This machine glues, seals, and discharges shipping containers even if sizes are mixed. No need for several different case sealing machines, or scheduling production for one size container at a time, or shutting down the packaging line to adjust the machinery for different sizes. Since the sealer is set up on a rotary line, you save space; the machine occupies less than 142 square feet in your plant. The model shown here takes cases 8" to 24" long, 6" to 22" wide, and 6" to 18" high. Other sizes available to suit almost of all needs. Versatile design lets you arrange it in any suitable layout to suit your production line. No operator needed.

J. L. Ferguson Co.



Circle 253 on Reader Service Card

Print, Code, and Mark Your Containers on the Production Line



Circle 254 on Reader Service Card

Whether you package your products in cartons or bags, you can print, code, and mark them on the production line with the Flexo-Printer. It can print anywhere on the bag or carton, and takes any sizes of both. It handles top and bottom simultaneously. Speeds are up to 2,100 cartons an hour (36" x 48"), and up to 3,600 an hour for smaller sizes. Magazine feeding system holds 150 cartons, with hand wheels to adjust for carton width and thickness. Flexo-Printer uses a flexographic inking system. A rubber roll runs constantly in a bath of ink, then contacts an engraved steel metering roll. The metering roll applies ink to the precision rubber type on a rubber roller. You replenish ink simply by pouring it into an open fountain; no need to shut the machine down. Virtually no maintenance needed. The machine adapts easily for other type packages or special positioning problems.

Industrial Marking Equipment Co., Inc.

For super SPEED and PERFORMANCE in stapling carton the ALL-NEW INTERNATIONAL

Completely Redesigned! Lighter in Weight! Easier-to-Set Controls! Lower Cost Carton Closing!

Only Portable Stapler With All These "Big Machine" Features:

- Penetration Adjustment! For complete product protection a simple twist of dial accurately controls staple depth.

 Clinch Control! A turn of the quick-set knob adjusts the staple grip for secure
- packaging.
- Floating Magazinel Minimizes jamming and can be removed in seconds without major disassembly—an exclusive feature in I.S.M. machines.
- Sure-Grip Handlel Smooth, self-returning action lessens operator fatigue, and contributes to faster carton closing.
- All-Aluminum Frame! Precision designed for longer service and easy, lightweight operation.
- Heavy-Duty Anvils! Special high-tensile steel resists damage.

CALL YOUR INTERNATIONAL DISTRIBUTOR FOR FREE DEMONSTRATION

P. O. BOX 270

Originators of Carton Closing Staplers

Circle 61 on Reader Service Card

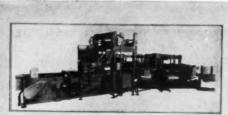
What?

Feed all these different sized cases, in random order, into one automatic case

ASK YOUR WHOLESALER

WRITE for 8 page technical brochure giving complete design, application and dimension data. Request Packomatic Brochure 100-60. sealing installation?

Yes! It's being done. The Omnimatic-Rotopress automatically seals and discharges corrugated shipping containers of widely varying dimensions, fed to it in random order, at speeds up to 20 cases per minute. A choice of pre-set discharge patterns permits the simultaneous use of as many as five different Rotopress discharge stations, with sealed cases of different heights automatically discharged to separate take-away conveyors. The G. E. installation shown below, employing a unique circular compression unit, occupies only 144.9 square feet, and permits random feeding of cases that may vary in length from 8" to 30", in width from 6" to 22", and in height from 6" to 18". This machine can be built to accommodate your particular range of case sizes.



Packomatic Omnimatic-Rotopress operating at the General Electric Company's Trumbull Lamp Plant at Warren, Ohio.

Packomatic

J. L. Ferguson Company
Box 1226 (Phone 6-6275)
Joliet, Illinois

Circle 136 on Reader Service Card

(continued)

Lightweight Packaging the Easy Way

Two electric staplers, Bostomatic Models B5E2 and B5E3, can perform many lightweight production line packaging jobs quickly, uniformly, and without operator fatigue. Use them for packing small parts and accessories in paper, plastic, or cloth bags. The B5E2 is fully automatic; just insert



the work and the special switch drives the staple. The B5E3 semi-automatic, foot or knee operated. Both staple items up to 1/8", with no need to adjust for thickness. Staples are supported while being driven, always drive straight. Adjustable gauge is easily set to position work up to 4½" deep. Both models are easy to load from the front with 210 ¼" staples. Just plug them into a 115 volt ac outlet.

Bostitch, Inc.

Circle 255 on Reader Service Card

More Stapling for Less Money

Model T-P Clip-Top Packer drives king-size staple clips at 400 a minute, automatically closing filled cartons from the outside. It has an automatic mechanical trip that clenches the staple and retracts instantaneously. No air cylinder, servo valve, lubricator, or filter. It uses a diaphragm chamber with only one moving part. It seals an average shipping carton in

a few seconds, for less than 1/3 cent. Adjustable anvil staples A, B, or C flute corrugated. Just twist the adjustor screw to change flutes.

Container Stapling Corp.

Circle 256 on Reader Service Card

Checkweigher Guards Against Over and Underfilling

This special 2-way segregation checkweigher handles up to 350 sealed containers a minute. It's designed for packaging operations requiring a compact production control unit to reject underweights and/or overweights. Any combination



of overfilled, underfilled, and acceptable packages can be rejected or passed. The machine weighs packages on the fly electronically, and detects variances as little as ¼ percent. FMC Packaging Machinery Div.

Circle 257 on Reader Service Card

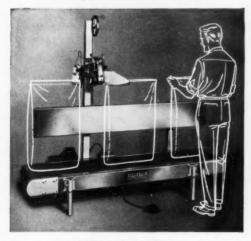
How to Mark Pillow Packs

Mark individually filled plastic pillow packs uniformly at production speeds with Markem Model 45A imprinter. It prints color code, contents, instructions, etc. on any size pack, up to 50 a minute. It's easy to register the imprint, and you can get special fixtures for ejection after marking. The 45A uses air-dry inks that come in a full range of colors. Rubber plates or type are easy to change. You can print areas up to 6-9/16" x 2-7/16" with it. Machine size: 13" x 23" x 26". Markem Machine Co.

Circle 258 on Reader Service Card

LOW COST

BAG CLOSING EQUIPMENT



AUTOMATIC MODEL BA-6

Bags start the sewing operation when they reach the head. After sewing, thread is cut automatically and conveyor belt continues to move bag. Instantaneous start/stop controls.







WIREBOUND BOXES AND CRATES

CORRUGATED FIBRE BOXES





The shell of the walnut is a typical example of rugged, dependable, functional "packaging". You get the same features in Superstrong Wirebound Boxes, Crates and Pallet Boxes . . . containers built to do a specific job quickly, efficiently, economically. One of our trained Superstrong Wirebound engineers will be glad to give you the rest of the story . . . just let us know where and when!

Call CAnal 6-0973 or write Dept. 300

RATHBORNE, HAIR & RIDGWAY BOX CO

1440 West 21st Place . Chicago 8, Illinois

REPRESENTATIVES IN ALL PRINCIPAL INDUSTRIAL AREAS Circle 124 on Reader Service Card

PACKAGING SUPPLIES

(continued)

Takes the Work Out of Strapping

Model RCNS pneumatic sealer has a pistol grip that makes it easy to seal 34" steel strapping with one hand. It weighs just 6 lbs. The op-



Circle 259 on Reader Service Card

erator simply sets the tool on the seal and pulls the trigger. Compressed air does the hard work - crimps every seal correctly, positively. For added speed and convenience, the new pistol grip sealer and the PN air tensioner (shown behind sealer) form a steel strapping combination that gives tight, secure bundles every time, quickly and easily.

Signode Steel Strapping Co.

Small Stapler Packs Big Punch

The Hand Box portable carton stapling machine has features you usually get only in larger models. Penetration control is adjustable for



Circle 260 on Reader Service Card

full or blind penetration with 8 depth positions. A quick set knob lets you select loose or tight clinch whether on A, B, or C flute corrugated. Free floating magazine can't jam, can be removed or replaced in seconds. All aluminum chassis is light, long-lasting, trouble-free. No-slip handle is easy to operate. Heavy International Staple & Machine Co.



1960 FORECAST

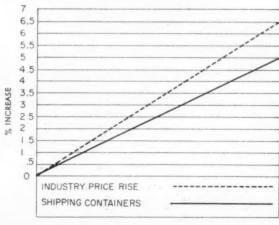
Shipping Containers

EQUIPMENT MANUFACTURERS PREDICT

Some changes in shipping containers and packaging supplies. Varied individual product improvements. No new trends indicated for '60..... What to look for in new products, changed products. A redesigned shipping bag. Will have new construction, new bag-seam adhesive. Will introduce a tear tape as part of the bag. . . . One manufacturer will improve finish on commercial grade steel strapping. Will be able to stand weather exposure. New flexible fiberboard will be available. Use: packaging delicate items. Special application in low-G areas. Manufacturer will bring out waterproof and fireproof packaging papers. Double protection. Look for low-cost shock indicator. For packaging in missile and electronics fields. New equipment for coating adhesives predicted. Also improved adhesive coatings. Manufacturer will bring out staples of greater leg length for carton sealing. Use on multi-wall corrugated.

What Will Handling Equipment Cost in 1960?

PACKAGING supplies and shipping container producers showed an overwhelming "no" response to the question of price increase in 1960. Average of the "yes" responses in the survey was about 5 percent, compared to the overall material handling equipment industry 6.5 percent increase. There were, however, sufficient "haven't decided" answers — factors such as the steel settlement, cost jumps in other materials and labor would shape their final decision —to show that packaging and shipping supplies manufacturers might have to turn towards price increases also.



Containers & Packaging Supplies

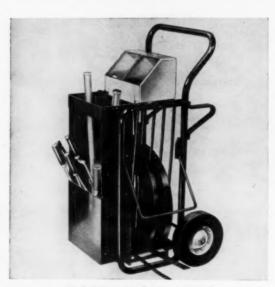
Redesigned Padded Bags Feature Tear Tape Opener



Jiffy padded shipping bags have been completely redesigned to offer more protection and make them easier to use. Biggest change is the addition of a tear tape opener. Once the bag is closed, just pull the tape to open it quickly and easily. The outer liner of each bag is waterproof, now made of 70\$\pm\$ basis weight extensible kraft paper, of golden color. Formerly they were brown kraft. The seam has been repositioned from the center of the back side to the edge, giving more printing area. That makes the back as well as the front available for your special imprints or instructions. All seams are now secured by a newly developed waterproof adhesive, making them as water-tight as the rest of the bag. These bags come in sizes and shapes to fit any type of product, from books to bottles of wine or delicate instruments. The built-in cushioning acts as a shock absorber to protect your product in transit. Just insert the product and close. The new bags are the same price as the old ones.

Jiffy Mfg. Co.

Circle 261 on Reader Service Card



Circle 262 on Reader Service Card

The state of the s

Circle 263 on Reader Service Card

Steel Strapping Station on Wheels

Take your strapping to the place where it's needed with Model A46A0 heavy duty steel strapping truck. It holds the coils of strap, strapping tools, seals, corner protectors, anchors — everything you need for efficient strapping, palletizing, or carloading. This model has higher capacity and is easier to use than older ones. It's made of all-welded tubular steel and has 10-inch rubber wheels and flared handles to make it easy to wheel around. Guide rods on the coil holder are easy to reposition to take various combinations of ¾-inch, 1¼-inch, or 2-inch heavy duty steel strapping. They're set at an angle so that as coils of strapping get smaller with use they stay in the right position for easy strapping.

Acme Steel Co., Steel Strapping Div.

Moistens Big Labels at a Touch

You can speed up shipping and mailing operations with the Glue-Fast Model S gummed label moistener. It's designed to make labeling quicker and cheaper, and assure that labels stick properly. Sturdily constructed in black enamel casting, it takes labels up to 5% inches wide. Wick roller action applies just the right amount of water to make the label stick; won't remove any of the glue. High capacity reservoir means you can use it for large mailings without stopping to refill. The chrome guide adjusts to any paper thickness. A special glue for ungummed labels is also available. It can stay in manually operated gluers overnight without crystallizing, eliminating daily wash-up. It's called GF\$5. Free 1-pint samples are available.

Glue-Fast Equipment Co., Inc.

NEW PRODUCTS



COMBINATION STRAPPING UNIT

A money-saving strapping "package" including stretcher cutter and dispenser—at a low-cost package price, is now available. Write: Dept. 86, A. J. Gerrard, 1960 Hawthorne Court, Melrose Park, Illinois.

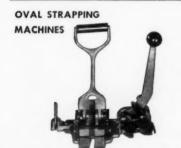
Circle 21 on Reader Service Card



Versatile stretcher for strapping boxes, cartons and bundling of compressible objects.

Also, easy to operate sealer for use with 1/4" strapbinder seals. Write: Dept. 84, A. J. Gerrard, 1960 Hawthorne Court, Melrose Park, Illinois.

Circle 22 on Reader Service Card



Are available in several sizes and styles to meet practically every industrial requirement. Write: Dept. 93, A. J. Gerrard, 1960 Hawthorne Court, Melrose Park, Illinois.

Circle 23 on Reader Service Card



Dual purpose cutter—cuts oval strapping, up to ¼" wide flat strap, as well as 14 gauge and finer round wire. A valuable tool that pays-for-itself in any receiving or shipping department. Write: Dept. 41, A. J. Gerrard, 1960 Hawthorne Court, Melrose Park, Illinois.

Circle 24 on Reader Service Card

JANUARY, 1960



Faster Production Line Strapping...
USING ONLY ONE TOOL!

ALL STRAPPING OPERATIONS COMBINED... New tool tensions, places seal in position, seals and scores strap for easy break-off. Strapping time is reduced... strap waste is eliminated.

FAST & EASY TO USE. This new line of A. J. Gerrard Stretcher-Sealers does the job faster, easier, wherever strapping is required—closure of television sets in corrugated cartons, strapping export boxes, palletizing cartons of nails, packaging of screw products.

FOR COMPLETE SPECIFICATIONS and our special handbook of strapping and materials handling products, use the coupon below or circle the reader service card.



- Continuous take up from reel
- Rugged durable construction

A.J. GERRARD

A.J. GERRARI

PRARD STRAPPING MATERIALS

1960 Hawthorne Court

MELROSE PARK, ILLINOIS

- Please send complete specifications on your combination stretcher-sealers—Models 2302 and 2303.
- Send free copy of handbook of strapping and materials handling products.

FREE NEW CATALOG

COMPANY

Ē_____

___TITLE__

ADDRESS

ZONE ___STATE

Circle 25 on Reader Service Card for more information



Has your packaging department been carefully analyzed and scientifically organized?

No matter how well it *appears* to be operating,

everyone concerned can benefit by these new, helpful data sheets which are free for the asking.

The first bulletins are now ready and more will be released at intervals as new suggestions are developed and proved. They will be sent to you without obligation if you'll let us know your interest, on your company letterhead.



MID-STATES GUMMED PAPER DIVISION MINNESOTA MINING & MANUFACTURING COMPANY

e York - Syrunese - Deston - Philodolphia - Affants - Cleveland - Channail - Kalemesso - St. Louis - Les Angeles

Circle 79 on Reader Service Card

CONTAINERS & PACKAGING SUPPLIES

(continued)

Pushbutton Strapping

Just set a dial for the length of strapping and the number of straps you need, and push the button. The Model #440 Bulkbinder Dial-A-Band



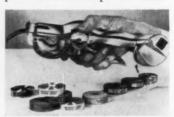
Circle 264 on Reader Service Card

does the rest. This heavy duty flat steel strapping dispenser automatically cuts the quantity and length you dialed. It's fully adjustable to take ¾", 1¼", or 2" flat steel strapping in ribbon wound coils. Electric model works on 110 volt single phase alternating current. Air operated models work on 60 to 90 psi.

A. J. Gerrard and Co.

Punch Your Name in Strap

The Dymo-Mite hand embossing machine lets you emboss your company name or any other message on plastic or metal straps. The manu-



Circle 265 on Reader Service Card

facturer also provides a wide variety of ½-inch wide tape in colored vinyl, aluminum, Monel, copper, stainless steel, etc. All kinds come with or without pressure sensitive adhesive backing. When the plastic tape is embossed the raised area changes color, resulting in white letters against a colored background. Heavy duty models also available.

Dumo Corp.

Stresses Proper Marking

The improved Weber hand printer has a high impact handle to increase shock resistance. You can use

GAYLORD DEPENDABILITY KEEPS YOUR PRODUCTION ROLLING

You get a clear track to corrugated boxes when you signal Gaylord to start the run. In all lines of industry, Gaylord has a well earned reputation for delivering the packaging . . . so you can package and deliver the goods . . . on schedule.





CROWN ZELLERBACH CORPORATION
GAYLORD CONTAINER DIVISION



IN CANADA · CROWN ZELLERBACH CANADA. LTD. VANCOUVER. B. C.

HEADQUARTERS. ST. LOUIS PLANTS COAST TO COAST



If you regularly
address 5 or more cartons
per shipment, you might be
shocked to find out how much it
is costing you to address your
multiple shipments with antequated, repetitive methods.

The modern STEN-C-LABL* Systems PROVIDE A TWO-WAY SAVING

Your present method of preparing your invoices, orders, bills of lading or shipping papers can also prepare STEN-C-LABLS at the same time. Whether you use manual or electric typewriters, electric billing or accounting machines, slave machines or

various magnetic tape and punched

IDP systems, there's a STEN-C-LABL to fit your requirements.

By making unlimited impressions direct to cartons, labels or tags

With handy squeeze-feed applicator, shipping department makes unlimited impressions direct to Panl-Labl printed on carton at no extra cost. Also addresses gummed labels and tags. Addressing is fast, neat, legible.

DURABLY MARKED AND PLAINLY LEGIBLE at handling distance. A STEN-C-LABL address is sunproof and waterproof—becomes permanent part of carton. Reproduction is sharp and easy to read at handling distance.

FREE BROCHURE gives full details.

MAIL COUPON TODAY!

STEN . C . LABL, INC.

MME-1, 1821 University Ave., St. Paul 4, Minn.

Yes, I'd like to know more about saving with STEN-C-LABLS.

NAME	
COMPANY	
ADDRESS	
CITY	STATE

*Registered U.S. Pat. Off. The term STEN-C-LABL is the trademark and exclusive property of STEN-C-LABL inc. All STEN-C-LABLS are manufactured by STEN-C-LABL, Inc., St. Poul, Minnesota under, U.S. Palent No. 2,771,026. Other patents pending.

Circle 94 on Reader Service Card

CONTAINERS & PACKAGING SUPPLIES

(continued)

it with special stencils for multiple carton shipment addressing, reproducing, marking, label printing, etc. by the touch stencil system, It prints



Circle 266 on Reader Service Card

on smooth or rough, flat or curved cardboard, paper, or wood. Printing surface is up to 3" x 7". You can get stencils with your company logotype die-cut for stenciling complete labels. Stencil typing can be done as a by-product, like a carbon copy, of your routine shipping and/or billing forms.

Weber Marking Systems, Inc.

Still Marking Tubes by Hand?

Here's an automatic tube marking machine that can modernize your tube operations whatever your needs.

It can mark on any kind of material — metal, plastic, rubber, glass. You can choose the method of marking too; the Mark V Volumark will ink-



Circle 267 on Reader Service Card

stencil, dry-wipe ink into an impression, or impress an imprint. Model A handles ½" to 2" pipe at up to 1,800 10-foot lengths an hour. Model B takes 2½" to 6" tube at up to 600 10-foot lengths an hour.

Ideal Stencil Machine Co.

Foam Cushioning

An unusual packaging material, urethane foam sandwiched between layers of kraft paper, combines cushioning and insulating properties. You can use it for a wide range of packaging applications.

Foam-Flex Corp.

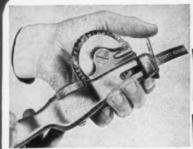
Circle 330 on Reader Service Card

Wall Chart Tells Tape Needs

See at a glance how much gummed tape you need for sealing different sizes and types of containers with the Econo-Chart just made avail-

(continued on page 126)

EMBOSSED LABELS MADE ON-THE-SPOT



DYMO-MITE
HAND EMBOSSING

MACHINE-34.95

A NEW CONCEPT IN IDENTIFICATION SYSTEMS

For plant, office, field and factory . . . you can now make your own labels right "on-the-spot" just where and when you need them. The DYMO-MITE embosses raised white letters on a variety of colored, pressure-sensitive vinyl tapes . . . as easily as dialing a telephone . . and best of all they cost just pennies a label. Use on tools, parts bins, switch boxes, shelves, controls, lackers, anywhere, everywhere, indoors or out . . . applications limited only to the scope of YOUR own imagination!

See your local distributor or—

Write today for FREE catalog and samples to: DY MO

2546 Tenth Street, Berkeley 10, Calif.

Circle 34 on Reader Service Card

MATERIAL HANDLING ENGINEERING

NEW Signode air power sealer reduces strapping time

This new Signode Model RCNS pneumatic sealer features a pistol grip that makes it easy and convenient to seal ¾-inch steel strapping with one hand. It weighs only six pounds. The operator simply sets the tool on the seal and pulls the trigger. Compressed air does the hard work—crimps every seal correctly, positively, quickly.



For added speed and convenience, the new pistol-grip sealer and a Signode PN air tensioner form a steel strapping combination that is fast, easy to handle, and minimizes waste motion and effort. You get tight, secure bundles every time.

The RCNS sealer is available on an annual rental or single payment basis, as are other Signode heavy-duty steel strapping tools. Let us arrange a demonstration on your premises at your convenience. Just write or call without obligation.

Send for new Booklet SPD 216 that describes the Signode line of air power tensioners and sealers and shows typical money-saving applications.





First in steel strapping

SIGNODE STEEL STRAPPING CO.

2618 N. Western Avenue, Chicago 47, Illinois

Offices Coast to Coast. Foreign Subsidiaries and Distributors World-Wide In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto Circle 93 on Reader Service Card

JANUARY, 1960



Work with your AIM*... Detroit Steel Corporation does... Steel Strapping improves coil handling

DETROIT STEEL CORPORATION, HAMDEN, CONNECTICUT, sought a better way to strap coils of strip steel for shipment. Their Acme Idea Man suggested an Acme Steel Pneumatic Stretcher to secure steel coils to wood pallets. (Idea No. U6-31)

Acme Idea Man
A. J. Payne serves
many companies
with time and
money-saving ideas.



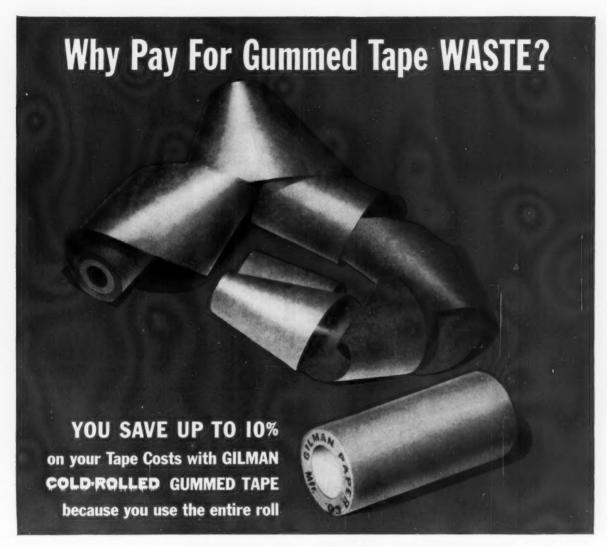
Now, with the Pneumatic Stretcher, all coils of steel are palletized with the same constant, even tension. Customers like this improved method since pallets arrive in damage-free condition because of the tighter, more secure straps. Employees like the Acme Steel Pneumatic Stretcher as it reduces fatigue and tiresome hand labor.

*Work with your Acme Idea Man. His suggestions have saved time, money and eliminated shipping damage for many companies. Contact him at the nearest Acme Steel office. Or write, Dept. MJU-10, Acme Steel Products Division, Acme Steel Company, Chicago 27, Illinois. In Canada, Acme Steel Company of Canada, Limited, 743 Warden Avenue, Toronto 13, Ontario.



STEEL STRAPPING

Circle 2 on Reader Service Card



Gummed tape that curls costs the nation's business a fortune every year in waste.

Gilman "Cold-Rolled" Gummed Sealing Tape, made with double AccuRay® nuclear controls, reduces tape curl, makes the entire roll usable right down to the core!

> Instead of paying a premium for such superior tape performance, you actually save money when you use Gilman Tape. Thrift, with highest quality-that's true economy!



for Gilman Taperegular or reinforced. If he cannot supply you-

Gilman Paper Company

630 Fifth Avenue, New York 20, N.Y. Western Sales Office: Daily News Bldg., Chicago 6, Ill. Mills at St. Marys, Georgia and Gilman, Vt.

Please send Free copies of ☐ "Gummed Tape Tips from Gilman" ☐ Color Swatch Book. Also, Free sample ☐ "Cold-Rolled" Gummed Tape ☐ "Cold Rolled" Reinforced Tape ☐ Asphaltic ☐ Non-asphaltic

COMPANY NAME.

ZONE STATE TITLE

INDIVIDUAL OUR PAPER MERCHANT.

Circle 119 on Reader Service Card

ADDRESS

CONTAINERS & PACKAGING SUPPLIES

(continued)

able. It's 17" x 22", planned for posting in the packing room near the actual sealing operation. It will speed packaging and cut tape wastage.

Hudson Pulp & Paper Corp.

Circle 331 on Reader Service Card

Corrugated Boxes for Heavy Machinery

Specially designed corrugated boxes can hold heavy machinery like



Circle 268 on Reader Service Card

gasoline engines (shown here) and are strong enough for four-tier stacking. Each tier consists of a regular slotted container holding eight engines kept in place by die-cut pads with contour cutouts. Users find packages of this kind cost less and are easier to handle and store than older ones of other materials.

Gaylord Container Corp.

1

Film Tape Resists Heat, Chemicals

Scotch brand Paklon film-backed tape no. 681 resists water, acids, alkalis, and wide temperature ranges. It has a transparent vinyl backing.



Circle 269 on Reader Service Card

It closely resembles other industrial tapes, but is more versatile. You can use it with most manual, semi-automatic, and automatic dispensers. It has high tensile strength and dimensional stability.

Minnesota Mining & Mfg. Co.

Collapsible Bulk Liquid Container

Like a giant toothpaste tube, the Sealdtank bulk liquid container can roll up into a compact unit when



Circle 270 on Reader Service Card

empty. Sealdtanks are made of many plies of rubber-coated rayon fabric. They can hold almost any kind of liquids, and come in several sizes. The one shown here holds 4,000 gallons. You can use them on trucks, trains, or ships.

U. S. Rubber



—engineered by the builders of the Vanguard Earth Satellite Sphere



COMPARE THESE IMPORTANT FEATURES:

- ▼ Exclusive, rugged forged ends on one-piece curb
- ▼ Full length hand grip for safe handling from any position
- ▼ Yellow lane markings on all boards
- ▼ Heat treatment after welding for longer life

Compare all the B & P features! Write today for the fact-packed B & P Dockboard folder.



BROOKS & PERKINS, Inc.

1938 WEST FORT STREET . DETROIT 16, MICHIGAN

AMERICA'S LARGEST MANUFACTURER OF MAGNESIUM ASSEMBLIES

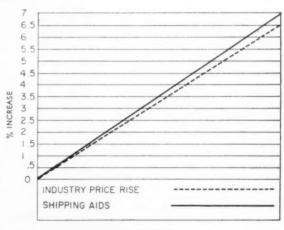


EQUIPMENT MANUFACTURERS PREDICT

Look for new developments. Containerization. Waste handling equipment. Dock boards. Conveyor-floor trucks. Railroad equipment. Containerization will spread in '60. Will develop as a science. Less haphazard. Needs standards. Manufacturer's handling equipment will have new hydraulic system. Reduces manual work Dock board developments. Company will bring out automatic dock board. Add to line of manual aluminum dock boards. Another dock board maker will begin use of light metals as components. Another will add alternate movement to automatically extending hinged dock board. Will have lateral movement with self-centering device. Makes spotting of carriers less critical.

What Will Shipping Aids Cost in 1960?

THE SHIPPING AIDS classification contains diverse kinds of equipment, as reported in the survey. Any trend of price increases, therefore, is bound to be somewhat general. Manufacturers in this category showed a majority of affirmative answers to the question of price increases. Average increase was 7 percent, half a percent above the general material handling equipment industry average of 6.5 percent. However, some manufacturers' determination to hold the price line was characterized by statements such as: "We hope to hold prices firm — and even add something to our distributors' profits by increased savings and sales."



Shipping Aids





Circle 272 on Reader Service Card

Self-Unloading Trailers Reduce Bulk Handling Costs

Airveyor Bulk Transport trailers are now standadrized intwo basic types: self-filling (by vacuum), and gravity filling (from overhead supply). Both are self-unloading by means of pressure. Both are produced in van-style chassis (left), or dump-type chassis (right). Van-style models have three vertical containers from which material funnels into a single underslung outlet line. The dump-type has a single tilting tank for unloading, a forward compartment housing the dust collector, blower, and engine,

and an optional tailgate for unloading. These trailers are built for dry materials that are not fluidizable, such as sugar, starch, malt, pebble lime, and plastics. They unload at up to 50 tons an hour. A closed circuit unloading system uses the same air over and over, eliminating the transfer of moisture from conveying air into sensitive materials. Each trailer has its own dust collector, so you don't need filters in your plant.

Fuller Co.

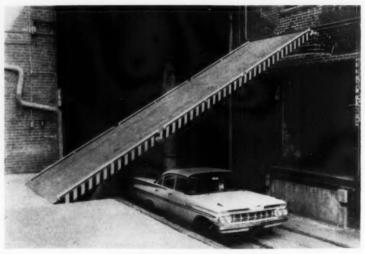


Circle 273 on Reader Service Card

Elevating Trailer Speeds Unloading

You can haul machinery, packages and similar merchandise quickly with no loading and unloading headaches using the ½-ton Trailevator. This self-elevating and self-lowering trailer has a hydraulic-and-mechanical system that adjusts the bed from ground level to road level in a few seconds. The body locks securely at 14" above ground for traveling, giving a shock-absorbing ride with independent spring suspension. It's 4 feet wide, 6 feet long. Sides are 15 inches high. Capacity is 1,000 lb. Standard accessories include dual combination tail lights and directional signals, twin reflectors and license light, third wheel with hand jack for easy hitching and parking, tie-down loops on sides and ends.

Trailevator Div. Magline Inc.



Circle 274 on Reader Service Card

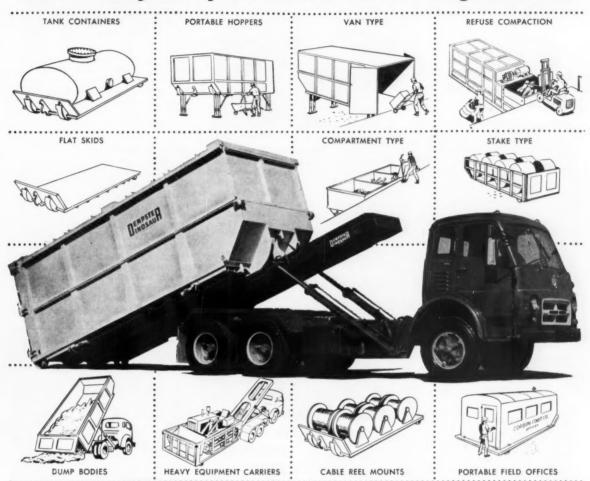
Hydraulic Bridge Ends Plant Traffic Nuisances

You can choose from several sizes of oil-hydraulic bascule bridges to span sunken rail sidings inside buildings, warehouses, etc., or to close a troublesome gap between two buildings. No more traffic delays or taking the long way around for delivery trucks, fork lift trucks, etc. The model shown here is 8' wide and 24' long with a reinforced steel decked floor complete with removable pipesection and guard rails. Its total weight is about 5,500 lb. A 10" oil-hydraulic cylinder does the elevating,

raising the bridge to full height in less than a minute. It has top and bottom pivot bearings and swivel connection to the bottom of the platform. The piston has a 5' stroke. The cylinder is installed in a recessed niche, resting at an angle approximately 45 degrees when the bridge is down and rising to vertical when it's up. An electric signal system tells traffic whether the bridge is raised or in position.

Globe Hoist Co. Industrial Lift Div.

One DINOSAUR With Detachable Containers **Solves Many Complex Materials Handling Problems**



Here's the materials handling tool that takes up where the fork-lift truck leaves off. Gigantic loads can be placed on skids, in tanks or containers. The DEMPSTER-DINOSAUR picks them up . . . automatically . . . in seconds . . . and whisks them to their destination, in-plant or to over-the-road locations. Here they are put down, intact . . . pushed off on a dock . . . left on telescopic legs . . . or dumped.

One truck handles any number of containers of many types. Value of truck is multiplied . . . standing-idle time is eliminated . . . loading and

handling is cut to the minimum. One man, the driver, handles the all-hydraulic operations without leaving the cab.

Containers available up to 40 cu. yds. and over . . . loads are limited only by the capacity of the truck. If you have a special problem send it in.

Write for FREE BROCHURE **DEMPSTER BROTHERS**

Knoxville 17, Tennessee, Dept. MH-1







Address_

To: DEMPSTER BROTHERS, Dept. MH-1 Knoxville 17, Tennessee Please send free Dinosaur Brochure

Circle 39 on Reader Service Card

Patents Pending

Low-cost way to load or lift

HYDRAULIC POWER HAS MANY USES IN MODERN INDUSTRY



loading dock needed

The Rotary Levelator Lift loads trucks from plant floor level, becomes part of when not in use. Economical, dependable oil-hydraulic operation.



Speed plant traffic

Move materials from one floor level to another on this heavy-duty hydraulic lift. Eliminates detours, saves space required for long ramps, and increases plant safety.



Efficient machine feeding

Keeping materials at convenient working level is just another use for versa-tile Rotary Levelator Lifts. Automatic controls speed operations, save on manpower required.

Rotary Oildraulic Levelator Lifts have countless applications in modern industry. Standard 6,000 and 12,000-lb. models are adaptable to many installations, special lifts with capacities to 300,000 lbs. or more can be engineered to your specifications. Mail coupon for more information.

Rotary Industrial Litts

ROTARY LIFT COMPANY Division of Dover Corporation Memphis, Tenn.-Chatham, Ont.

MAIL FOR MORE DATA



Rotary Lift Co. 1144 Kentucky Memphis 2, Tenn.

Please send information on Rotary Levelator Lifts.

Name.

Address

Circle 91 on Reader Service Card

SHIPPING AIDS

(continued)

Dockboard Comes Assembled

For ease in handling, the Adjust-A-Lip dockboard arrives at your plant completely assembled and ready for installation. It's easy to install, needs



Circle 275 on Reader Service Card

only a shallow rectangular pit. Just place it in the pit and secure with 6 anchor bolts. No wires, hoses, or outside power sources needed. Hi-Lo dockboards come in a full range of sizes for every loading dock requirement. All come preassembled.

Kelley Co., Inc.

Yard Ramps Form Loading System

With the Mobil-Dock system you can spot incoming and outgoing shipments and load or unload materials exactly when and where required.

No pile-ups at the dock. The system consists of a Mobile Loading Ramp for loading and unloading between



Circle 276 on Reader Service Card

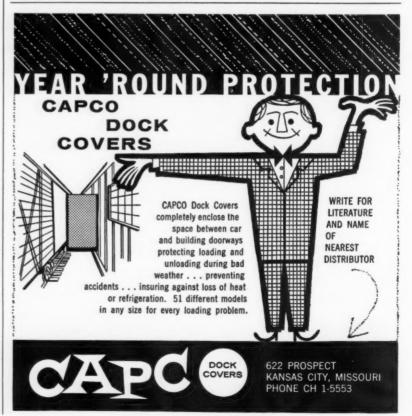
trucks and yard without a dock. The magnesium yard ramps are easy to move about to the spots where they're needed. The system is said to eliminate multiple handling, costly loading delays caused by queuing, and shuttling shipments to and from fixed dock locations.

Magline Inc.

Retractable Dock Fits All Needs

Here's a powered dock leveler for almost all applications. Model 6030 reaches out and retracts 30", moves up or down 24". It comes prewired as a complete package. Capacity is 20,000 lb. When not in use it's flush for cross traffic, with lip pulled in to avoid possible damage. Separate push buttons for up-down and in-out may be operated one at a time or together. Size: 6' x 8' retracted, 6' x 101/2' extended.

Hartman Metal Fabricators, Inc. Circle 277 on Reader Service Card



Speeds Hopper Car Unloading



The Mulkey Car-Un-Loader unloads sand, gravel, or other bulk materials from hopper cars quickly, efficiently, and cheaply. You can unload a standard hopper car and stockpile its cargo in 1½ to 2 hours. The machine is portable, on rubber tires for easy moving from car to car.

It's equipped with a trailer hitch for towing. It's powered by a small gasoline engine. It's designed so that the flow rate is the same as the Mulkey portable belt conveyor. Used together, these two units can unload into trucks or stockpiles as much as 50 feet away.

Sam Mulkey Co.

Circle 278 on Reader Service Card

Dock Leveling the Modern Way



The Auto-Mechanical Dock Board is free-floating, automatic, and has a hinged lip. No need for manual lip operation.
Just clamp this dock
leveler into a 12" pit and
it's ready to use. When the truck is in position

your dock personnel release the board. It adjusts itself to the proper level to rest on the truck bed. When the truck pulls out a worker need only step on the leveler to return it to dock position.

Auto-Mechanical Dock Board, Inc. Circle 279 on Reader Service Card

retractable tunnel and cot between dock door DENTS. Truck Dock Door Shelters

Dock-Door SHELTERS

- Protection from rain, snow, winds, cold, heat.
- Saves FUEL.
- Protects MER-CHANDISE.
- Reduces ACCI-
- Raises employee MORALE.
- Expands by gravity.
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- · One-man oper-

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RAIL DOCK SHELTERS THAT COMPLETELY RECESS FOR MAXIMUM CLEARANCE...

OPENS IN SECONDS TO CUT HEAT LOSS, PROTECT PERSONNEL AND PRODUCTS IN BAD WEATHER!

Frommelt's newest RAIL-DOX recesses flush with the building line to conform with state and railroad right-of-way clearance requirements. Heavy, long-lasting galvanized steel fame is spring-loaded for easy, one-man operation. Choice of fire and mildew-resistant Froprene, Tufftex, or UL Approved Duck fabrics.

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DUBUQUE, IOWA Fabricators of Approved Safety Products

to open or close any freight car door in 20 seconds or less!





ONE MAN CAR DOOR OPENER

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The Nolan Model H One Man Car Door Opener has been in successful use for many years, by thousands of companies who recognize its exclusive features of speed and safety. This popular tool enables one man to do by himself what formerly required the time and assistance of several men, usually taken off other jobs, to tug and yank while risking mangled hands, strained backs and other serious injuries. With a few quick pulls on the anchor chain as shown here, one man can get the most stubborn door rolling and wide open in a jiffy. It will keep men working steadily and safely without exposing them to the hazards present when make-shift methods are used to open car doors. Note above how operator is away from the front of the door . . . away from the front of the door . . . away from fits injurious, killing effects if it should fall!

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The Nolan Co. 110 Pennsylvania St., Bowerston, Ohio F.O.B. Bowerston

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Air Powered Hydraulic DOCKBOARD



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Nothing to lift or carry, the AERO-BOARD safely stands upright, out of the way when not in use. The operator must turn the air valve handle that releases air pressure before the board lowers into position.

Another time saving and safety feature—the van can be spotted snug against the bumper dack and the van doors opened (or closed) with the AERO-BOARD in the upright position.

Custom Engineering Service

The standard AERO-BOARD is engineered and manufactured for easy installation on docks with permanelly constructed bumpers to carry a loaded 4,000 lb. capacity lift truck. The same model with a separately constructed fobricated steel bumper (see illustration at right) can be installed on concrete or wood flush docks.

SIMPLIFIED DESIGN. Parts included in the AERO-BOARD "kit", as assembled at the factory, are adaptable to most docks without extensive dock modification.

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KIT INCLUDES 57" long x 60" wide safety tread steel board with tapered front edge and guard rail, mounting plate, hydraulic cylinder and cradle, fluid reservoir tank with mounting bracket, control valve and flexible hose lines



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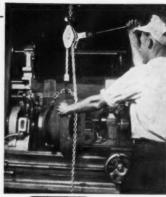


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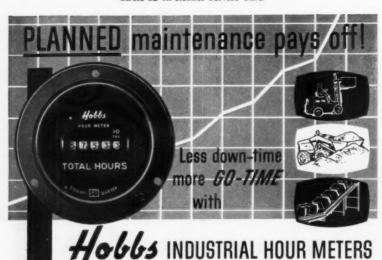


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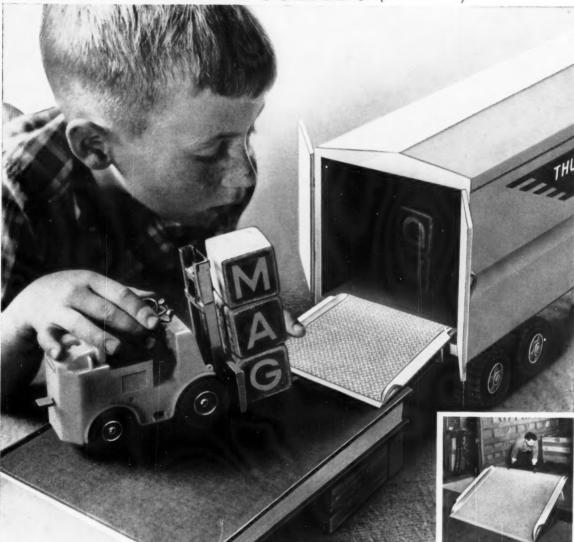
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